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Bureau of Markets
SEED REPORTER
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ANNOUNCEMENT.

The Seed Reporter, which has been published by the Bureau of Markets Seed Reporting Service since November, 1917, will be discontinued after this issue. This publication was started as the official organ of the Seed Reporting Service, which was a war emergency service, conducted under the Food Production Act (Public No. 40, 65th Congress). It was continued after June 30, 1919, under the regular appropriation for the Department of Agriculture. During the two years of publication twenty-five numbers have been issued, as follows:

Volume 1, numbers 1 to 9, November, 1917-June, 1918.
Volume 2, numbers 1 to 12, July, 1918-June, 1919.
Volume 3, numbers 1 to 4, July, 1919-October, 1919.

Hereafter the seed reports of the Seed Reporting Service will be included in the new "Market Reporter," which probably will be published monthly by the Bureau of Markets, beginning with November, 1919. The Market Reporter will also include market reports of live stock, dairy products, cotton, grains, fruits, vegetables, and other agricultural products.

In the issue of the Seed Reporter for July 12, 1919, attention was called to the fact that an index to volumes one and two of the Seed Reporter was being prepared for print to be furnished on application to those who wished to preserve a file of the Seed Reporter for reference. As the index has not yet been printed, it will be extended to include the four numbers of volume three and will be available to anyone desiring a copy in the near future. Additional copies of most issues of the Seed Reporter are available and will be furnished as long as they last to those who wish to complete a file. All requests should be addressed to the Seed Reporting Service, Bureau of Markets, Washington, D. C.

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Stocks of Italian Red Clover and Alfalfa Seed Reported Low and Crop Short

The Italian crop of red clover seed is reported to be less than half of normal and the crop of alfalfa seed a little over half of normal. There is practically no carry-over of red clover seed and the good qualities of alfalfa seed are nearly sold out. Prices of alfalfa seed in Italy advanced during the early part of September from $45.00 to $58.00 per quintal (from 20 to 26 cents per pound).

MILLET SEED OUTLOOK.

The returns from an extensive inquiry made the latter part of September indicate a larger production of millet seed this season than last year. In a few of the leading producing sections the acreage of millet that was cut or would be cut for seed is reported to be a little smaller than the acreage that was harvested for seed last year, but in most of the millet seed-producing sections the yield per acre probably will be larger than that of last year. Estimates of the average yield per acre of golden millet seed this season vary from about 600 pounds in Colorado to 1,250 pounds in southeast Nebraska. Similar variations may be noted in the yields of other kinds of millet seed. The quantity of millet seed of the 1918 crop carried over by growers and shippers is reported to be very small—probably much smaller than usual. The carry-over of different kinds of millet seed in the hands of dealers (mostly seedsmen), on June 30, 1919, and 1918, as shown in the seed survey of June 30, 1919, amounted as follows:

Golden Millet, 5,420,782 pounds on June 30, 1919; 6,189,273 pounds on June 30, 1918. Common Millet, 2,699,639 pounds on June 30, 1919; 2,055,171 pounds on June 30, 1918. Siberian Millet, 782,797 pounds on June 30, 1919; 645,417 pounds on June 30, 1918. Broom-corn Millet, 1,554,592 pounds on June 30, 1919; 1,169,996 pounds on June 30, 1918. Hungarian Millet, 253,260 pounds on June 30, 1919; 201,700 pounds on June 30, 1918. Japanese Millet, 144,317 pounds on June 30, 1919; 992,066 pounds on June 30, 1918.

It would appear from the total receipts of dealers during each of the two years ending June 30, 1919, and 1918, as obtained from the survey referred to above and which are published elsewhere in this issue, that the 1918 crop each of golden, common, and Japanese millet seed was smaller than the 1917 crop, whereas the 1918 crop each of Siberian, Hungarian, and broom-corn millet seed was larger than the 1917 crop. By means of the figures given in the accompanying table for golden, common, Siberian, and broom-corn millet seed, a comparison between the 1918 and 1919 production of each may be made. At the time of the inquiry little millet, except broom-corn millet, had started to move from the hands of growers, hence it was difficult for correspondents to make accurate comparisons of acreage and yield per acre of seed between this and last year's crop, and also a normal crop.

Missouri Valley jobbers were making more or less nominal bids for country-run seed of good, average quality, per 100 pounds f. o. b. country points, for each of the millets, as follows:

Golden millet	$2.50 to $3.25
Common millet	2.10 to 2.40
Siberian millet	2.10 to 2.40
Broom-corn millet	2.25 to 2.50

Not many transactions were being consummated at these prices because comparatively little millet seed, except broom-corn millet and golden millet in a few sections, had been threshed up to September 30 and the large jobbers have been paying more attention to alfalfa and other kinds of seed that do not appear to them to be so plentiful as millet seed.

A summary by States of some of the information received in connection with the forms that were sent out and returned is given below:

Tennessee.—Some correspondents in Tennessee stated that the weather was a little too dry for the obtaining of a good yield per acre of golden millet, which is the kind of millet that is grown most extensively in central Tennessee. Much of the threshing had been completed by September 30 and growers were being paid $4 to $5 per 100 pounds for country-run seed and $4.50 to $6 for recleaned seed. These prices are materially higher than those being offered in other sections for golden millet because the golden millet crop is cultivated during the growing season in Tennessee and it generally commands a premium over the same kind of millet produced elsewhere.

Kansas.—The harvesting of millet seed was just commencing in Kansas about September 20th to 27th in the important producing sections. Only a small portion of the crop had been threshed by the end of September. Most of the large jobbers in the Missouri Valley were paying little attention to the small quantity that was being offered because their attention has been centered on alfalfa seed. Nominal bids of $2.50 to $3.25 per 100 pounds for golden millet and $2 to $2.75 for common and Siberian millet were being made to growers at country points.

Oklahoma.—A number of correspondents reported that the threshing of millet seed in Oklahoma was nearly completed under ideal weather conditions. The production is expected to be larger than that of last year because of the increased yield per acre. Growers have not been disposing of their seed freely at prices of $2 to $2.50 per 100 pounds that have been prevailing.

Texas.—Apparently plenty of moisture and in a few localities almost too much moisture was received in the millet seed sections of Texas this year to insure a good yield per acre. Doubtless the production will surpass considerably that of last year which was seriously affected by drouth. According to the reports received all of the millet seed has been harvested and most of it has been threshed. Growers appeared to be unwilling to sell their seed at prevailing prices of $2 to $3 per 100 pounds for country-run seed and only a small percentage of the 1919 crop seemed to have left their hands by the close of September.

Missouri.—A somewhat smaller acreage of golden millet in northern Missouri than last year, but a larger yield per acre are expected to be harvested this year. In a few areas the harvesting of the crop had been completed by the end of September whereas in other areas it was just commencing. Threshing was well under way in a few localities but the quantity of seed that had been marketed was rather small. Bids of $2.50 to $3.00 per 100 pounds were being made for average country-run seed, which is of excellent quality.

Iowa.—In the scattered areas of Iowa where Japanese millet seed is produced that crop was reduced considerably by drouth. Most of it was threshed by the last of September and growers were being offered $3.50 to $4 per 100 pounds. The threshing of other kinds of millet seed had not commenced to any extent at the time of the inquiry.

Nebraska.—The acreage of millet that has been harvested for seed this season is estimated to be less than that of last year because more of it seems to have been cut for hay than was the case last year. The yield per acre of golden, common, and Siberian millet is expected to be larger than that of last year, judging from the relatively small quantity that had been threshed during the last week in September.

Minnesota.—A somewhat larger production of common millet seed than last season is expected in Minnesota this season. The areas of millet seed production in this State are small and scattered and it is very difficult to make an accurate estimate of the crop in any year. Nominal bids of $2 to $2.50 were made for seed that was being harvested the last of September.

South Dakota.—The threshing of broom-corn millet seed in the northern part of South Dakota was reported to have been completed by September 15 and growers were being offered $2.25 per 100 pounds for country-run seed. The threshing of common and Siberian millet, which generally occurs after broom-corn millet is threshed, had not started to any extent by the end of September.

North Dakota.—A larger acreage and yield per acre of broom-corn millet, Siberian, and common millet seed are expected in North Dakota this year. The threshing of broom-corn millet in southern North Dakota was completed by the middle of September. Prices of $2.20 to $2.50 per 100 pounds were reported as being paid for this kind of millet seed.

Colorado.—The harvesting of broom-corn millet seed in Colorado started about August 20 and the threshing started somewhat less than a month later. Threshing of other kinds of millet seed was taking place during the last week of September. While the acreage of millet that was cut for seed this season seems to have been about the same as that cut last year, the yield per acre of broom-corn and common millet is not expected to be so large as that of last year, when the yield was above normal. Prices of $2 to $2.50 have been offered for each of the kinds of millet, but growers have not been selling freely at these prices.

ESTIMATED ACREAGE, YIELD, AND PRICES OF GOLDEN, COMMON, SIBERIAN, AND BROOM-CORN MILLET SEED.

STATE OR DISTRICT	1919 acreage cut or to be cut for seed as compared with normal acreage harvested for seed.	1919 acreage cut or to be cut for seed as compared with the acreage harvested for seed in 1918.	1919 yield of seed per acre compared with normal yield.	1919 yield of seed per acre compared with 1918 yield.	Average yield per acre this season (1919).	Prices offered about Sept. 27, 1919, by shippers or dealers to growers for country-run seed per 100 pounds.	Prices offered about Sept. 27, 1919, by shippers or dealers to growers, basis clean seed, per 100 lbs.	1919 acreage cut or to be cut for seed as compared with normal acreage harvested for seed.	1919 acreage cut or to be cut for seed as compared with the acreage harvested for seed in 1918.	1919 yield of seed per acre compared with normal yield.	1919 yield of seed per acre compared with 1918 yield.	Average yield per acre this season (1919).	Prices offered about Sept. 27, 1919, by shippers or dealers to growers for country-run seed per 100 pounds.	Prices offered about Sept. 27, 1919, by shippers or dealers to growers, basis clean seed, per 100 lbs.
	%	%	%	%	Lbs.	Dollars	Dollars	%	%	%	%	Lbs.	Dollars	Dollars
	GOLDEN MILLET.							COMMON MILLET.						
Tennessee ...	85	87	91	98	925	4.35	5.00	.....	.....	.....	.....	.....	.....	.....
NW. Kansas.	100	117	118	117	960	2.50	3.00	90	105	111	107	900	2.25	2.75
NE. Kansas.	90	90	95	98	910	2.75	3.10	95	93	95	100	850	2.30	2.40
SW. Kansas.	101	101	100	104	1,125	2.25	3.00	100	105	98	108	1,250	2.00	2.30
SE. Kansas.	98	102	98	100	700	2.50	3.00	105	110	95	110	750	2.20	2.50
N. Missouri..	91	94	104	114	900	2.50	3.00	90	95	100	105	925	2.00	2.40
W. Nebraska.	85	87	98	102	1,000	2.00	2.25	85	90	105	108	950	1.90	2.20
SE. Nebraska	75	75	100	108	1,250	2.25	2.50	.....	.....	.....	.....	.....	.....	.....
Colorado	100	103	95	103	600	2.00	2.15	100	98	98	91	710	2.00	2.05
W. Oklahoma.	95	100	112	112	900	2.00	2.40	108	122	110	108	1,200	1.85	2.00
Texas	103	111	118	125	1,125	2.00	2.80	.....	.....	.....	.....	.....	.....	.....
S. Iowa	98	86	101	103	860	2.50	3.00	.....	.....	.....	.....	.....	.....	.....
Minnesota ...	.....	.....	.....	.....	.....	.....	.....	102	105	100	102	970	2.00	2.25
South Dakota	.....	.....	.....	.....	.....	.....	.....	87	92	110	112	800	2.00	2.25
North Dakota	.....	.....	.....	.....	.....	.....	.....	133	148	105	100	885	1.90	2.20
	SIBERIAN MILLET							BROOM-CORN MILLET						
NW. Kansas..	110	110	120	110	1,125	2.50	2.75	.....	.....	.....	.....	.....	.....	.....
NE. Kansas..	85	100	87	110	875	2.25	2.50	.....	.....	.....	.....	.....	.....	.....
SW. Kansas..	78	82	88	91	915	1.90	2.30	.....	.....	.....	.....	.....	.....	.....
W. Nebraska.	83	87	98	102	1,000	1.75	1.90	.....	.....	.....	.....	.....	.....	.....
SE. Nebraska	93	87	100	125	1,000	2.25	2.50	.....	.....	.....	.....	.....	.....	.....
Minnesota ...	103	110	103	100	1,050	2.50	2.75	.....	.....	.....	.....	.....	.....	.....
South Dakota.	113	133	100	100	1,000	2.50	2.75	90	95	110	112	1,000	2.20	2.50
North Dakota	110	135	100	100	1,000	2.35	2.55	120	112	106	110	1,250	2.30	2.50
Colorado	106	107	102	100	610	2.05	2.20	102	101	96	93	900	2.15	2.20

IMPORTS OF CLOVER SEED

Into the United States by Countries From Which Imported, for Fiscal Years Ending June 30, 1910-1919, inclusive

(From Data Obtained From the Bureau of Foreign and Domestic Commerce, of the Department of Commerce.)

(Quantities given are in pounds.)

IMPORTED FROM—	1919	1918	1917	1916	1915	1914	1913	1912*	1911*	1910*
	RED CLOVER SEED									
Austria-Hungary	.....	.....	.....	.....	.....	112,708	241,700	.....	.....	.....
France	220,206	187,000	4,817,383	22,214,818	8,170,792	5,255,930	349,347	.....	.....	.....
Germany	.....	.....	.....	44,000	8,800	556,207	2,586,785	.....	.....	.....
Italy	262,247	647,479	660	10,256,053	262,144	44,000	2,530,519	.....	.....	.....
England	59,375	.....	868	730,835	18,701	632,892	151,210	.....	.....	.....
Canada	480,522	48,790	561,005	67,342	79,825	129,406	207,351	.....	.....	.....
Other countries	16,500	22,440	591,351	163,353	209,495	33,075	5,930	.....	.....	.....
Total	1,038,850	905,709	5,971,267	33,476,401	8,749,757	6,764,218	6,072,842	.....	.....	.....
	ALL OTHER CLOVER SEED									
Austria-Hungary	.....	.....	.....	.....	666,971	582,348	726,473	3,072,389	423,640	583,200
France	935,868	1,130,004	5,230,562	4,750,049	10,708,534	10,146,780	6,507,749	8,882,820	6,188,352	2,566,048
Germany	.....	.....	.....	.....	327,775	3,643,934	3,068,773	12,951,378	4,963,514	5,011,350
Italy	11,000	637,585	.....	44,100	81,402	.....	286,276	5,823,223	2,485,202	320,259
Netherlands	25,900	30,240	13,200	110,952	30,096	15,105	64,603	8,980	58,922	46,249
England	118,192	417,956	784,416	436,553	1,392,704	2,456,659	1,547,082	3,659,087	843,174	625,965
Scotland	.....	52,900	69,528	107,569	13,000	305,271	60,124	318,481	69,652	62,640
Ireland	.....	76,614	263,728	45,024	4,480	219,160	34,720	5,600	.....	2,800
Canada	4,754,605	4,649,091	5,093,361	1,553,267	1,445,255	5,612,110	2,679,792	3,551,792	9,750,982	3,711,155
Russia in Asia	.....	.....	601,571	1,215,637	.....	.....	.....	.....	275,736	110,579
Other countries	.....	77,996	144,526	100,269	736,737	362,064	176,123	277,387	298,652	29,585
Total	5,845,565	7,072,386	12,200,892	8,363,360	15,406,954	23,343,431	15,151,715	*38,551,137	*25,357,826	*13,069,830

*Imports of red clover seed included in "All other clover seed" prior to fiscal year ending June 30, 1913.

Estimated Percentage of Seed Peas, Millet Seed, and Forage Sorghum Seed Planted That Is Obtained from Each of the Three General Sources of Supply

The following table shows for field peas, millets, and forage sorghums the estimated percentage of the total quantity of seed of each planted that is obtained from each of the three general sources of supply. A similar table for grasses and clovers and alfalfa was published in the Seed Reporter for July, 1919.

Division and State	FIELD PEAS			MILLETS			FORAGE SORGHUM		
	Produced on farm where used.	Obtained directly from other farmers.	Obtained from dealers.	Produced on farm where used.	Obtained directly from other farmers.	Obtained from dealers.	Produced on farm where used.	Obtained directly from other farmers	Obtained from dealers.
	%	%	%	%	%	%	%	%	%
North Atlantic Division									
Maine	19	2	79	....	....	100	....	....	100
Vermont	3	....	97	....	....	100	....	....	100
New Hampshire	5	3	92	4	....	96	....	....	.....
Massachusetts	4	6	90	2	3	95	....	....	100
Connecticut	2	2	96	1	1	98	....	....	100
Rhode Island	....	....	100	10	....	90	....	....	100
New York	8	5	87	2	1	97	....	....	100
New Jersey	2	2	96	....	....	100	....	....	100
Pennsylvania	12	2	86	5	1	94	8	....	92
Middle Atlantic Division									
Maryland	11	13	76	5	2	93	4	2	94
Delaware	52	22	26	....	....	100	....	....	100
Virginia	23	9	68	8	3	89	29	9	62
West Virginia	8	4	88	7	3	90	19	16	65
North Carolina	55	18	27	3	4	93	50	13	37
South Carolina	64	18	18	6	6	88	28	13	59
Southeastern Division									
Tennessee	50	17	33	13	9	78	54	20	26
Georgia	64	17	19	9	3	88	34	10	56
Florida	28	10	62	15	3	82	15	7	78
Alabama	67	21	12	29	8	63	46	12	42
Mississippi	65	17	18	8	....	92	56	12	32
East Central Division									
Michigan	31	6	63	8	3	89	....	....	.....
Ohio	5	2	93	6	4	90	11	3	86
Indiana	10	6	84	13	5	82	19	9	72
Illinois	10	11	79	11	8	81	15	4	81
Kentucky	16	7	77	8	3	89	43	14	43
North Central Division									
Wisconsin	29	11	60	7	3	90	6	5	89
Minnesota	16	10	74	14	11	75	4	5	91
North Dakota	7	5	88	13	8	79	....	....	100
South Dakota	8	5	87	28	23	49	8	5	87
West Central Division									
Iowa	7	1	92	16	10	74	11	7	82
Missouri	20	12	68	22	10	68	28	18	54
Nebraska	3	5	92	39	16	45	42	19	39
Kansas	7	4	89	31	22	47	50	20	30
Southwestern Division									
Arkansas	46	22	32	1	1	98	35	15	50
Oklahoma	21	17	62	20	16	64	34	21	45
Texas	34	9	57	18	8	74	35	13	52
Louisiana	61	8	31	....	....	.....	27	4	69
Rocky Mountain Division									
Wyoming	27	2	71	13	12	75	13	12	75
Oklahoma	21	17	62	20	16	64	34	21	45
Utah	13	4	83	....	....	100	....	....	100
New Mexico	37	18	45	21	15	64	33	21	46
North Pacific Division									
Montana	20	9	71	8	7	85	1	....	99
Idaho	22	10	68	....	1	99	....	....	.....
Washington	26	5	69	....	....	100	....	....	.....
Oregon	5	6	89	1	1	98	....	....	.....
South Pacific Division									
California	14	8	78	8	3	89	13	19	68
Nevada	....	....	.....	....	....	.....	....	....	.....
Arizona	15	9	76	33	15	52	35	35	30

MOVEMENT AND QUALITY OF CLOVER AND GRASS SEEDS

Medium Red Clover—(East Central Division).—Reports received about September 30 indicate that about 25 per cent of the 1919 crop of medium red clover seed had left the hands of growers in the East Central Division by that date. It was noted that the movement of seed was greatest in those sections where there are a number of hullers and where the hulling of the seed is not deferred until threshing of grain, fall plowing and other farm operations are completed. The quality of this year's crop in this division is about equal to that of last year.

(North Central Division).—The hulling of medium red clover seed had just begun during the latter part of September in the North Central Division and only 15 per cent of the crop had been disposed of by growers by September 30. The early reports of a good yield per acre in Minnesota have been confirmed by recent reports. The quality of the crop is better than that of last year and a little above normal.

(North Pacific Division).—About 25 per cent of the crop had left the hands of growers in the North Pacific Division. The quality is reported to be better than last year's but not equal to normal.

(West Central Division).—The hulling of medium red clover in the West Central Division was started during the last two weeks of September, and growers had disposed of approximately 30 per cent of their crop by the end of that month. Only small lots of 5 to 20 bushels were produced by farmers in this division. They are inclined to hold what little surplus they will have until spring, when they will dispose of it to their neighbors without recleaning it.

Alsike Clover.—(East Central Division).—Sixty-six per cent of the alsike clover seed in the East Central Division had left the hands of growers by September 30. The quality of this season's crop is equal to last year's and nearly equal to normal. Some reports indicate that an increased acreage will be saved for seed next year because there has been relatively more alsike clover sown than red clover during the past two years.

(North Central Division).—In some sections of the North Central Division the hulling of alsike clover seed has been delayed awaiting the hulling of red clover seed, so that both crops could be hulled at one time. Doubtless this accounts for the fact that only 40 per cent of this year's crop had been disposed of by growers by the close of September. The quality is estimated to be about 25 per cent better than that of last year.

(New York).—The hulling of alsike clover seed in the leading producing section of New York was retarded, as other farm work has been, by the shortage of labor. Not more than 45 per cent of the crop had left the growers by September 30. The quality of this season's crop is inferior to that of last year's large crop in this State.

The accompanying table indicates the movement and quality of this year's crop of medium red and alsike clover seed by States or districts, as compiled from numerous reports received about September 30, 1919.

STATE OR DISTRICT	MEDIUM RED CLOVER			ALSIKE CLOVER		
	Percentage of 1919 crop that had left growers' hands	Quality of 1919 crop as compared with:		Percentage of 1919 crop that had left growers' hands	Quality of 1919 crop as compared with:	
		Normal (100%)	Last year (100%)		Normal (100%)	Last year (100%)
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
Michigan	2	75	95	55	95	105
N. Illinois	12	50	105	85	110	105
C. Illinois	65	100	75	65	100	105
N. Indiana	50	95	100	50	105	115
C. Indiana	15	110	100	10	75	85
S. Indiana	10	95	90	.....	.....	.....
NE. Ohio	20	100	95	85	95	95
Minnesota	15	125	140	40	95	110
E. Wisconsin	5	110	115	.....	.....	.....
W. Wisconsin	10	85	125	45	100	125
S. Wisconsin	35	110	140	35	125	135
Idaho	20	95	100	60	80	100
Oregon	35	95	125	35	85	100
Nebraska	20	110	115	.....	.....	.....
Kansas	35	125	80	50	100	100
NE. Iowa	5	100	110	.....	.....	.....
SW. Iowa	30	100	100	.....	.....	.....
SE. Iowa	35	120	120	70	110	110
Missouri	50	85	75	.....	.....	.....
New York	.....	.....	.....	45	95	85

White Clover.—About 75 per cent of the white clover seed crop in Wisconsin had left the hands of growers by the end of September. Prices of $45 per 100 pounds for country-run and $50 for recleaned seed were being offered, and growers were selling freely at these prices. The quality of the seed is equal to normal.

Sweet Clover.—Considerable variation is noted in the reports for a given State concerning the percentage of the 1919 crop of sweet clover seed that had left the hands of growers by the end of September. The averages of these percentages given for several of the States are as follows:

Kansas .....50 per cent. Nebraska .....10 per cent.
Kentucky .....60 per cent. Montana .....60 per cent.
Illinois ..... 5 per cent. Mississippi ..... 5 per cent.

Insufficient or somewhat conflicting data were received from Idaho, Utah, Wyoming, Colorado, South Dakota, and other States which produce sweet clover seed, relative to the movement of this seed. In most of these States the

greater portion of the seed probably was still in growers' hands on September 30. Little or none of the crop in North Dakota had been threshed by that date. The quality of the crop appears to be a little inferior to that of last year, though in some sections it is reported to be 5 to 10 per cent better than last year's quality.

Alfalfa—(Kansas). The alfalfa seed crop in Kansas is estimated by some important dealers to be about 20 per cent of normal. It is very difficult to estimate the production of seed this year because some growers who usually save the second crop for seed may save the third crop for that purpose. No killing frosts were reported in the leading seed-producing areas and it is possible that some of the latest fields may still produce a seed crop. About 20 per cent of the crop had moved from the hands of growers by September 27, though in some localities none of the crop had been hulled and in others 50 to 75 per cent had been hulled and disposed of to the buyers who were usually at hand as soon as any seed was ready to be marketed by the growers. The quality of the seed that has been marketed is about normal and somewhat better than that of last year—containing fewer brown seeds than last year.

(Nebraska). Only about 5 per cent of the Nebraska crop was reported out of the hands of growers by the end of September. The quality of the seed is fully equal to normal and 10 to 15 per cent better than that of last year.

(Texas and New Mexico). Approximately 50 per cent of the seed in these two States was believed to have left the hands of growers by the last of September. The quality of the early seed was about normal but it is thought that the heavy rains received in some sections near the end of the month will impair the quality of the late seed.

(Arizona). At least 90 per cent of the alfalfa seed produced in the Yuma and Salt River valleys was out of the hands of growers by September 30. The quality of the seed is equal to normal and last year's crop.

(California.) The alfalfa seed in northern California was contracted early at $17 per 100 pounds to the grower. In Lake County, where threshing is generally done later than in some sections, most of the seed is still in the hands of growers and they are not selling freely at prevailing prices of $22 per 100 pounds country-run and $25 for recleaned seed. About 50 per cent of the seed produced in the Sacramento and San Joaquin valleys and about 90 per cent of the crop in Riverside County had been disposed of by growers by the close of September. The quality of the seed in California varied somewhat in the different producing sections but on the whole was fully equal to normal and somewhat better than that of last year.

(Utah). Only a small percentage of the crop in Utah was reported to have been threshed by September 30. Many growers contracted their crop at $20 to $25 per 100 pounds, basis clean seed. Growers who did not sell their crop in advance have been offered from $2 to $5 per 100 pounds more than those who sold early.

(Idaho). In some sections of Idaho threshing of alfalfa seed was well under way the latter part of September and much of it had been sold at $20 to $25 per 100 pounds for recleaned, common alfalfa and $35 to $40 for recleaned Grimm alfalfa. The quality of the seed is equal to normal.

(Montana). Because of the activity of seed buyers in Montana, approximately 90 per cent of the short alfalfa seed crop in northern Montana was disposed of by the growers during the last half of September. The quality of the seed is good and is thought to be fully equal to normal.

(South Dakota). About 40 per cent of the alfalfa seed in South Dakota had left the hands of farmers or was contracted for delivery after threshing. Early sales to seedsmen's representatives were made at $20 to $24 per 100 pounds for common alfalfa and $40 to $45 for Grimm alfalfa. Late in September contracts at $27 for common alfalfa were being made for seed which averaged in quality about 15 per cent better than that of last year or than normal.

Timothy.—About 80 per cent of the Iowa timothy seed crop and 70 per cent of the Missouri crop had moved from growers by the end of September. Of this movement, about 25 to 30 per cent had taken place between August 22 and September 27, during which time prices paid to growers at country points declined about 60 cents per 100 pounds of clean seed.

In some of the other important timothy seed producing States the percentage of the 1919 crop in each State that had left growers' hands by August 22 and September 30 was found to be as follows:

Minnesota .....10% by August 22; 70% by September 30.
South Dakota..... 5% by August 22; 60% by September 30.
North Dakota..... 2% by August 22; 60% by September 30.
Illinois .....35% by August 22; 50% by September 30.
Ohio .....20% by August 22; 65% by September 30.

No material changes from the August reports were noted in the September reports relative to the quality of this season's crop of timothy. There were localities, as there always are, where some of the seed was badly hulled or stained by rains but the quality of the 1919 crop taken as a whole was equal to normal and somewhat better than that of last year.

Redtop.—Approximately 60 per cent of the redtop seed crop in Illinois had moved from growers by September 30. Prices of $14 and $15 per 100 pounds were being paid to growers for recleaned or "silver" seed. Country-run seed "in the dirt" was bringing from $7 to $12 per 100 pounds. Growers were selling freely at these prices. The quality is not so good as was estimated earlier in the season. The most recent reports indicate the quality of the 1919 crop to be about 10 per cent inferior to last year's crop and a normal.

Kentucky Bluegrass.—About 75 per cent of the 1919 crop of Kentucky bluegrass had left the hands of growers in Kentucky and practically all of the Missouri-Iowa seed had been disposed of by growers in these two States by September 30. As a matter of fact only about 5 per cent of the crop remained in the hands of growers in Missouri and Iowa as early as August 22. The quality of the Missouri crop was very good but that of the Kentucky crop was about 10 per cent below normal and possibly 5 per cent below last year's quality because of the light weight of the 1919 seed. Prices paid to growers in Kentucky during September have been the same or 50 to 75 cents more per 100 pounds of stripped seed than those prevailing the latter part of August.

Orchard Grass.—The movement of orchard grass seed from the hands of growers during September was slow, probably because prices offered to growers declined materially in all of the important producing sections. In the Kentucky-Indiana and Ohio districts a decline of about $3.50 per 100 pounds of country-run seed was noted; in the Virginia district the decline was a little less, the prices that were being offered on September 30 being about $2 per 100 pounds less than those offered to growers on August 22. About 70 per cent of the crop in Kentucky, 50 per cent of the crop in Ohio, and about 30 per cent of the crop in Virginia had left the hands of growers by September 30. The estimates of the quality of the 1919 crop were lower than those reported last month, and it would appear that the quality of this season's crop is about 15 per cent inferior to that of a normal or last year's crop.

Meadow Fescue.—About 95 per cent of the meadow fescue seed crop had left the hands of growers by September 27. Much of the seed was disposed of by growers at $25 or less per 100 pounds, though for a short time prices as high as $34 or $35 were being offered. The latest offer for clean seed was reported to be $25. Recent reports indicate that the germination of the 1919 crop is somewhat below normal.

Sudan Grass.—Reports received relative to the Sudan grass seed crop in the Texas Panhandle indicate that the production this year was considerably larger than that of last year. Most of the seed was contracted before threshing at $5 to $7 per 100 pounds, and later $8 to $9 were paid for it. Practically none of the Kansas-grown Sudan grass seed had moved from the hands of growers by the end of September.

IMPORTS OF FORAGE PLANT SEEDS PERMITTED ENTRY INTO THE UNITED STATES.

Under the Seed Importation Act.

Compiled by the Seed Laboratory of the Bureau of Plant Industry, United States Department of Agriculture.

KIND OF SEED	Month of September		3 mos. ending Sept. 30	
	1919	1918	1919	1918
	Pounds	Pounds	Pounds	Pounds
Alfalfa	1,644,700	22,000	2,911,000	22,000
Bluegrass:				
Canada	47,000	48,700	193,900	48,700
Clover:				
Alsike	845,800	801,800	1,108,800	1,050,200
Crimson	2,600,300	44,000	4,072,200	154,100
Red	1,157,300	.....	2,497,900	43,600
Clover Mixtures:				
White and Alsike	.....	.....	.....	30,000
Millet:				
Broom-corn	.....	.....	225,400	.....
Orchard Grass	217,200	.....	438,300	.....
Rape	.....	.....	.....	151,900
Rye Grass:				
English	134,400	44,800	134,400	190,600
Italian	33,600	.....	78,400	15,700
Timothy	.....	5,900	3,200	40,400
Vetch:				
Hairy	46,300	133,000	50,000	167,100
Spring	.....	.....	144,800	.....

TIMOTHY, CLOVER, ALFALFA, AND KENTUCKY BLUEGRASS SEED PRICES.

In the accompanying table are given: The average prices per 100 pounds that are being paid to growers for timothy, red, alsike, and sweet clover, alfalfa and Kentucky bluegrass seed, for country-run and for clean (or basis clean), seed; and the average wholesale and retail selling prices of seedsmen per 100 pounds for these seeds. These prices were obtained about September 30, 1919, in response to inquiries sent to seed shippers, seedsmen, and county reporters. It will be noted that many spaces are left blank opposite those States where little or no seed of the kinds included in the table is grown, or where the reports varied considerably, largely because the seed had not started to move freely from growers' hands, and prices, therefore, were not well established.

Though the table indicates the difference in price being paid to growers and that charged by seedsmen, this difference does not take into account the difference in quality between seed as it comes from the grower and from the seedsman. To the price paid growers, must be added transportation, cleaning, grading, sacking, buying, and selling expenses, etc., in order to arrive at the ultimate cost of the seed to the seedsman. The spread therefore does not represent the seedsman's profit but is given in order to indicate, in general, dealers' buying and selling prices. In many cases there is a considerable range in these prices because of the marked difference in quality of seeds from various sections and of the best grades offered by seedsmen. It is to be expected, therefore, that the price paid to a grower and an individual seedsman's selling price may be considerably higher or lower than those shown in the table.

TIMOTHY, CLOVER, ALFALFA, AND KENTUCKY BLUEGRASS SEED PRICES.

(All Prices in Dollars per 100 Pounds.)

STATE OR DIVISION	Timothy				Red Clover				Alsike Clover			
	Average price paid to grower for		Seedsmen's selling price for best grade		Average price paid to grower for		Seedsmen's selling price for best grade		Average price paid to grower for		Seedsmen's selling price for best grade	
	Country-run.	Clean.	Wholesale.	Retail.	Country-run.	Clean.	Wholesale.	Retail.	Country-run.	Clean.	Wholesale.	Retail.
New York	.....	.....	12.05	13.00	.....	.....	49.85	52.30	.....	.....	44.25	47.20
Pennsylvania	.....	.....	12.40	13.35	.....	.....	50.00	52.00	.....	.....	45.30	46.65
Maryland	.....	.....	12.40	14.00	.....	.....	50.30	52.00	.....	.....	45.50	52.00
Virginia	.....	.....	.....	.....	.....	.....	50.00	55.00	.....	.....	48.00	52.00
Maine	.....	.....	13.15	15.00	.....	.....	50.00	.....	.....	.....	47.50	53.00
Ohio	9.00	11.35	12.25	14.20	41.70	44.50	49.00	51.00	37.50	38.70	44.00	50.00
Indiana	10.30	11.45	12.00	14.80	40.40	41.75	48.40	50.50	35.20	40.00	42.80	44.20
Illinois	10.10	11.35	12.00	14.25	39.60	42.90	48.50	51.25	34.90	40.00	43.75	47.00
Kentucky	10.55	12.00	12.40	13.35	41.75	46.00	48.60	51.65	.....	.....	44.00	47.50
Michigan	.....	.....	12.90	13.15	42.00	43.40	49.00	53.20	34.60	.....	43.25	46.30
Wisconsin	9.00	10.90	11.80	13.15	40.50	44.20	48.55	50.60	33.90	36.20	42.80	44.95
Minnesota	9.55	9.80	10.90	12.00	41.70	.....	49.00	52.00	35.00	.....	46.00	47.20
North Dakota	.....	.....	11.35	12.85	.....	.....	48.65	55.85	.....	.....	44.65	49.65
South Dakota	.....	.....	11.00	12.75	.....	.....	49.50	53.00	.....	.....	.....	.....
Montana	.....	.....	14.00	15.00	.....	43.00	.....	.....	.....	36.00	.....	.....
Nebraska	.....	11.10	12.50	14.35	40.00	43.15	48.80	51.70	.....	.....	45.00	46.55
Kansas	.....	.....	12.50	14.25	.....	.....	50.00	53.25	.....	.....	.....	.....
Iowa	10.35	10.85	12.20	13.10	39.00	41.00	48.60	50.25	.....	.....	44.00	45.80
Missouri	9.90	10.75	12.45	13.20	.....	.....	49.50	51.65	.....	.....	45.00	47.30
Colorado	.....	.....	14.00	14.85	.....	.....	49.50	52.50	.....	.....	47.00	48.00
Oklahoma	.....	.....	.....	.....	.....	.....	52.00	55.00	.....	.....	.....	.....
Utah	.....	.....	.....	.....	.....	.....	50.50	.....	.....	.....	43.50	.....
Idaho	9.00	11.45	.....	.....	42.40	43.70	.....	.....	38.20	39.50	.....	.....
S. Pacific Division	.....	.....	16.00	20.00	.....	.....	53.00	58.00	.....	.....	53.00	57.00

STATE OR DIVISION	Sweet Clover				Alfalfa				Kentucky Bluegrass			
	Average price paid to grower for		Seedsmen's selling price for best grade		Average price paid to grower for		Seedsmen's selling price for best grade		Average price paid to grower for		Seedsmen's selling price for best grade	
	Country-run.	Clean.	Wholesale.	Retail.	Country-run.	Clean.	Wholesale.	Retail.	Country-run.	Clean.	Wholesale.	Retail.
New York	.....	.....	25.00	28.00	.....	.....	30.50	36.00	.....	.....	25.40	28.00
Pennsylvania	.....	.....	26.00	29.00	.....	.....	30.85	.....	.....	.....	.....	.....
Maryland	.....	.....	26.00	30.60	.....	.....	31.50	.....	.....	.....	25.60	28.00
Virginia	.....	.....	.....	.....	.....	.....	31.00	33.50	.....	.....	.....	.....
Maine	.....	.....	26.50	30.00	.....	.....	.....	.....	.....	.....	30.00	35.00
Ohio	.....	.....	25.10	30.00	.....	.....	30.00	.....	.....	.....	25.00	26.00
Indiana	.....	.....	25.00	27.00	.....	.....	32.00	.....	.....	.....	24.00	27.00
Illinois	21.00	.....	25.00	30.00	.....	.....	31.50	34.00	.....	.....	25.50	30.00
Kentucky	21.50	24.00	.....	.....	.....	.....	.....	.....	11.60	22.20	25.50	26.80
Michigan	.....	.....	28.00	30.50	.....	.....	32.00	.....	.....	.....	26.00	32.00
Wisconsin	.....	.....	26.65	32.50	.....	.....	31.50	34.00	.....	.....	25.85	29.50
Minnesota	.....	.....	26.50	30.50	.....	.....	**31.75	**33.00	.....	.....	25.50	.....
North Dakota	.....	.....	27.65	30.65	.....	.....	**32.35	**37.00	.....	.....	25.00	28.00
South Dakota	.....	26.65	23.50	27.50	22.00	26.50	.....	.....	.....	.....	27.00	32.00
Montana	.....	22.00	.....	.....	23.00	27.00	**32.00	.....	.....	.....	.....	.....
Nebraska	.....	.....	27.25	30.00	21.00	24.00	35.00	37.00	.....	.....	26.00	31.15
Kansas	18.25	21.15	24.50	27.15	21.50	24.25	29.85	31.60	.....	.....	25.00	29.35
Iowa	.....	.....	26.00	29.50	.....	.....	29.00	31.00	.....	.....	27.15	30.50
Missouri	.....	.....	25.00	27.75	.....	.....	31.00	32.85	.....	.....	25.40	28.05
Colorado	.....	21.00	24.00	26.55	.....	23.00	30.00	32.30	.....	.....	28.00	30.00
Oklahoma	.....	.....	27.00	30.00	.....	.....	30.00	34.00	.....	.....	27.00	35.00
Utah	19.00	22.00	24.00	.....	.....	26.80	.....	.....	.....	.....	27.00	.....
Idaho	19.00	21.25	.....	.....	21.60	23.10	.....	.....	.....	.....	.....	.....
S. Pacific Division	.....	.....	30.00	34.00	22.00	25.00	31.00	33.50	.....	.....	32.50	38.50

**Alfalfa prices are for central and southern-grown seed, except in the Dakotas, Minnesota, Montana, and Oregon.

STOCKS AND PRICES OF MAINE SEED POTATOES

The total stocks of potatoes in Maine are reported to be about 95 per cent of last year and 85 per cent of normal. The quality of all varieties for seed purposes is good and equal to normal except perhaps the Green Mountain, a small percentage of which is affected with dry rot. Wholesale prices for seed stock f. o. b. Maine points on October 7, shipment to be made within the next two weeks or before it becomes necessary to use heaters in the cars, were as follows: Irish Cobblers, Spaulding Rose, and Bliss Triumphs, $4.00 per barrel; Green Mountain, $3.75 per barrel. Good quality eating potatoes were being quoted at about $3.00 per barrel f. o. b. Maine points.

It is estimated that of the total stocks of seed potatoes about 60 per cent is Irish Cobbler, 30 per cent Green Mountain, and 10 per cent Spaulding Rose and Bliss Triumph. Farmers continue to hold for higher prices and the local shipping market is somewhat dull. Movement to outside markets is slow because of the serious car shortage and unless shipping conditions improve soon, there may be heavy losses from freezing as the local warehouses are full and will not hold all of the crop.

SUMMARY OF REPORTS OF SEED SURVEYS

Under authority conferred in the Food Production Act (Public No. 40, 65th Congress), four general seed surveys were conducted by the Seed Reporting Service of the Bureau of Markets. The dates of these surveys were February 1 and July 1, 1918, and January 1 and June 30, 1919. In the accompanying table there is presented a tabulated summary of the stocks, receipts, and exports reported in these surveys. The figures compiled from Section 4 of the seed surveys of July 1, 1918, and June 30, 1919, covering field seeds of those kinds which are commonly used for food, feed, or manufacturing purposes, are not included in this summary. This table gives in convenient form, for all vegetable seeds covered by the surveys and for field seeds of those kinds which are used primarily for planting purposes, complete figures for the three years, 1917 to 1919, inclusive, showing stock on hand when stocks are usually largest (January 1 or February 1), stock on hand when stocks are lowest (June 30, which is the usual date of taking annual inventory), and the receipts, estimated sales, exports, and imports for each of the three 12-month

SUMMARY OF VEGETABLE AND FIELD SEEDS, STOCKS AND RECEIPTS

KIND OF SEED.	STOCK ON HAND JUNE 30			STOCK ON HAND			TOTAL RECEIPTS FOR YEAR ENDING JUNE 30		
	1919	1918	1917	Jan. 1, 1919	Feb. 1, 1918	Feb. 1, 1917	1919	1918	1917
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
VEGETABLE SEEDS									
Beans—Dwarf snap	14,974,514	5,668,906	4,750,668	26,187,252	11,915,254	10,748,984	40,169,329	24,196,871	22,846,427
Beans—Garden pole (not including Lima)	2,475,400	1,891,054	2,436,849	3,765,255	2,522,763	2,348,647	7,450,659	3,721,833	4,193,769
Beet—Garden (Imported)	384,553	615,657	821,243	638,507	696,265	828,893	454,604	468,074	448,509
Beet—Garden (Domestic)	1,587,495	385,715	227,909	1,851,804	548,903	266,090	4,452,363	968,033	551,349
Beet—Mangel (Imported)	622,829	631,071	521,100	728,583	654,879	732,591	541,326	730,506	488,114
Beet—Mangel (Domestic)	176,230	62,465	29,342	263,447	87,682	44,469	571,105	82,836	127,093
Beet—Sugar (Imported)	*13,600,000	16,569,812	12,109,340	.....	14,343,855	10,792,956	*6,900,000	15,128,753	17,944,816
Beet—Sugar (Domestic)	.....	5,658,805	3,203,552	.....	6,729,169	4,289,837	.....	7,472,394	7,661,130
Cabbage (Imported)	189,418	174,089	276,735	156,961	209,554	284,228	228,856	117,217	168,559
Cabbage (Domestic)	403,785	436,269	457,586	456,357	541,229	423,858	421,061	594,079	517,024
Carrot	1,055,673	573,262	267,661	1,466,078	751,871	373,867	3,073,243	2,106,009	1,094,366
Cauliflower	10,820	8,064	10,667	8,465	9,674	9,421	15,473	9,037	12,708
Celery (Imported)	18,506	26,918	27,084	23,873	27,907	32,005	7,183	18,588	16,770
Celery (Domestic)	95,703	76,281	72,644	111,883	87,377	53,151	131,383	67,511	89,856
Cucumber	1,145,128	1,185,946	1,029,944	1,518,311	1,377,593	989,261	1,302,555	1,298,009	1,328,823
Kale	81,589	46,791	82,934	75,601	54,790	87,787	144,457	73,778	107,796
Lettuce	913,143	879,169	713,558	1,155,831	1,049,038	798,591	1,395,063	1,578,257	1,660,161
Muskmelon	381,265	414,227	423,185	554,560	543,048	402,232	403,027	381,464	399,450
Watermelon	960,142	671,326	550,097	1,410,854	922,615	586,329	1,747,091	1,385,398	1,041,050
Onion seed (Imported)	75,846	37,883	22,954	85,405	71,725	62,821	120,288	141,175	110,137
Onion seed (Domestic)	752,465	310,517	359,353	1,330,767	783,147	697,690	2,827,209	2,182,904	3,068,111
Onion sets	28,009	176,437	131,671	36,540,330	28,278,454	11,459,058	65,959,234	59,046,749	43,236,261
Parsley	115,604	162,675	165,708	162,309	169,486	146,737	174,725	227,031	261,902
Parsnip	66,457	15,903	77,199	112,157	98,473	130,693	405,289	180,777	262,379
Peas—Garden	9,795,056	8,892,940	13,044,844	49,770,739	35,667,246	32,618,673	76,302,941	59,397,675	60,724,696
Pepper	67,015	33,468	24,989	74,250	38,763	32,710	147,972	76,206	45,361
Pumpkin	306,816	250,282	155,473	362,658	278,465	207,541	491,696	495,412	442,167
Radish (Imported)	137,147	150,532	202,022	127,193	162,722	233,798	126,135	120,346	208,854
Radish (Domestic)	1,173,768	685,719	869,112	1,692,132	902,292	902,178	3,238,365	1,303,693	1,560,838
Salsify	25,269	29,134	16,486	41,886	40,565	26,198	53,612	101,382	62,820
Spinach (Imported)	480,223	457,008	192,093	513,808	257,587	307,298	426,347	778,260	716,356
Spinach (Domestic)	1,028,338	114,550	67,559	1,276,252	263,003	66,816	2,955,684	696,606	281,624
Squash—Summer	144,698	147,377	129,950	193,538	156,702	123,303	237,809	247,402	284,227
Squash—Winter	131,105	126,223	138,474	162,483	170,971	158,544	254,539	237,886	218,950
Sweet corn	4,621,384	1,651,413	2,661,464	9,144,078	6,407,887	6,633,379	20,220,347	11,480,321	15,483,042
Tomato	388,774	190,603	181,393	460,447	286,768	240,608	762,069	439,569	330,698
Turnip—English	2,515,022	2,421,510	3,191,378	2,095,246	2,381,207	3,048,709	1,727,265	1,155,420	1,314,039
Turnip—Swede	510,936	226,443	320,433	282,852	256,473	521,496	601,354	269,875	365,562
FIELD SEEDS									
CLOVERS:									
Red clover	1,838,560	4,177,647	15,533,691	24,761,661	32,882,616	31,191,633	81,312,761	93,128,311	116,771,400
Alsike clover	239,857	3,059,422	3,459,306	12,029,701	13,735,111	7,005,854	31,763,576	34,936,072	25,282,252
White clover	348,538	845,861	761,483	1,356,664	1,920,430	906,951	2,975,971	4,197,299	3,145,845
Crimson clover	1,399,392	1,345,819	1,979,493	1,066,575	1,649,356	1,428,647	4,568,436	4,090,246	8,751,420
Sweet clover	862,075	1,217,976	543,821	2,994,390	2,309,006	1,898,583	12,187,346	6,216,160	5,734,767
Bur clover	109,244	205,726	122,937	137,260	213,020	71,386	142,507	411,023	388,745
LESPEDEZA	20,962	24,077	16,494	93,873	206,140	151,514	513,427	642,593	1,435,510
ALFALFA	4,242,443	11,320,640	11,796,025	18,903,988	26,682,259	18,538,612	46,048,277	44,750,630	58,326,145
GRASSES:									
Timothy	56,822,806	80,744,706	68,586,907	103,664,566	107,494,901	66,205,481	210,564,925	191,963,907	281,214,984
Redtop	9,767,112	11,981,823	10,818,165	16,023,721	18,793,211	10,217,047	23,276,326	21,737,032	27,996,717
Orchard grass	240,729	1,066,230	1,390,361	2,282,593	3,029,648	2,184,291	5,869,343	6,294,434	6,635,769
Kentucky bluegrass	1,425,169	3,362,864	5,618,095	4,590,599	5,362,430	5,681,385	9,713,337	10,462,678	13,200,204
Bermuda grass	17,077	45,732	48,080	54,749	102,747	63,156	147,247	204,270	134,597
Bromus inermis	16,176	24,281	62,231	314,831	325,478	285,689	626,353	334,844	698,910
Meadow fescue	459,726	851,779	934,020	788,777	1,013,747	601,858	719,975	1,402,450	2,044,709
VETCHES:									
Common vetch	254,572	2,119,976	1,496,123	797,185	2,869,968	1,659,171	1,984,507	5,244,308	5,859,438
Hairy vetch	244,844	529,899	524,172	339,231	802,399	401,820	1,343,910	2,564,087	1,708,349
MILLETS:									
Golden millet	5,420,782	6,189,273	4,256,607	9,051,889	10,226,142	12,708,469	28,738,001	37,055,211	37,782,261
Common millet	2,699,639	2,055,171	1,136,528	8,254,910	4,534,837	3,232,294	17,340,247	15,242,976	7,885,174
Siberian millet	782,797	645,417	537,319	2,591,136	1,194,046	1,423,989	7,585,026	5,985,025	9,229,015
Hungarian millet	253,260	201,700	318,320	769,507	467,496	454,378	2,288,032	493,198	1,424,549
Japanese millet	144,317	992,066	1,697,307	1,281,367	2,309,636	1,940,356	2,312,519	2,552,433	4,090,848
Broom-corn millet	1,554,592	1,169,996	524,868	4,671,928	3,468,515	2,437,948	16,625,419	8,112,393	5,281,685
SORGOS:									
Amber sorgo	3,736,996	6,098,796	857,314	8,892,073	7,970,686	8,097,660	40,449,592	35,562,600	39,976,993
Orange sorgo	796,091	5,256,044	214,935	4,826,054	3,636,460	2,073,992	11,464,172	18,570,654	17,337,046
Sumac sorgo	648,617	3,881,999	391,260	4,548,255	4,241,537	8,436,676	10,399,158	19,812,420	19,684,782
All other sorgos	559,319	1,253,780	121,817	1,713,779	1,328,512	89,234	4,249,867	4,671,432	2,181,285
SUDAN GRASS	136,041	669,780	251,286	1,055,841	850,740	659,525	6,242,488	4,415,611	2,134,480
RAPE (for sowing)	1,329,375	4,070,449	874,104	4,691,525	7,838,664	2,951,135	6,953,578	18,817,322	14,522,408

*Sugar beet seed stock on hand June 30, 1919, and total receipts for year ending June 30, 1919, were not obtained in the general seed survey of June 30, 1919. Figures given here include both domestic and imported seed, and were computed from carry-over June 30, 1918, production in 1918, imports for year ending June 30, 1919, and estimated consumption for year ending June 30, 1919.

periods covered by the reports received in the survey.

The export figures given represent those received in the seed surveys except where complete totals are available from the Bureau of Foreign and Domestic Commerce of the Department of Commerce. It is recognized that some seeds might be exported or sold for export by those who are not regularly engaged in the seed business, and which therefore might not be included in the figures received in the seed surveys.

The figures given for imports of field seeds are those compiled by the Seed Laboratory of the Bureau of Plant Industry and represent forage crop seeds permitted entry into the United States under the Seed Importation Act. Those for imports of vegetable seeds were obtained from the Bureau of Foreign and Domestic Commerce of the Department of Commerce.

The accuracy of data obtained in commercial surveys depends upon the care exercised by those reporting in the surveys to present accurate figures as well as upon the care taken in editing and compiling the data for the final report. Every possible effort has been made by the Seed Reporting Service of the Bureau of Markets to check and compare the reports received in order that they may present accurately the information called for.

SUMMARY OF VEGETABLE AND FIELD SEEDS SALES, EXPORTS, AND IMPORTS

KIND OF SEED.	ESTIMATED SALES FOR YEAR ENDING JUNE 30.			EXPORTS FOR YEAR ENDING JUNE 30.			IMPORTS FOR YEAR ENDING JUNE 30.		
	1919.	1918.	1917.	1919.	1918.	1917.	1919.	1918.	1917.
	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.
VEGETABLE SEEDS									
Beans—Dwarf snap	30,863,000	23,280,000	23,520,000	338,058	199,002	194,959	.....	.....	.....
Beans—Garden pole (not including Lima)	6,866,000	4,270,000	4,635,000	30,791	26,552	17,234	.....	.....	.....
Beet—Garden (Imported)	686,000	675,000	515,000	.....	.....	.....	235,109	447,878	483,112
Beet—Garden (Domestic)	3,250,000	810,000	505,000	162,084	42,293	14,283	.....	.....	.....
Beet—Mangel (Imported)	550,000	620,000	620,000	.....	.....	.....	.....	.....	.....
Beet—Mangel (Domestic)	457,000	50,000	120,000	41,183	7,355	16,619	.....	.....	.....
Beet—Sugar (Imported)	.....	.....	.....	.....	.....	.....	986,676	15,636,541	14,465,635
Beet—Sugar (Domestic)	.....	.....	.....	33,845	30,346	300	.....	.....	.....
Cabbage (Imported)	214,000	220,000	270,000	.....	.....	.....	196,929	83,210	108,397
Cabbage (Domestic)	454,000	615,000	605,000	10,986	15,468	17,237	.....	.....	.....
Carrot	2,591,000	1,800,000	1,110,000	652,341	400,009	159,270	16,443	32,500	15,351
Cauliflower	13,000	11,600	11,700	356	516	355	11,403	7,969	7,799
Celery (Imported)	16,000	19,000	18,000	.....	.....	.....	*318,587	*167,684	*755,532
Celery (Domestic)	112,000	94,000	61,000	10,990	3,997	1,927	.....	.....	.....
Cucumber	1,343,000	1,140,000	980,000	55,605	38,653	44,921	.....	.....	.....
Kale	110,000	110,000	126,000	117	214	277	18,145	8,016	16,090
Lettuce	1,361,000	1,415,000	1,480,000	280,712	270,426	313,678	.....	.....	.....
Muskmelon	436,000	390,000	340,000	3,305	2,600	3,023	.....	.....	.....
Watermelon	1,458,000	1,265,000	1,015,000	9,972	6,205	7,499	.....	.....	.....
Onion seed (Imported)	83,000	126,000	125,000	.....	.....	.....	.....	.....	.....
Onion seed (Domestic)	2,385,000	2,230,000	2,860,000	380,266	242,232	291,783	.....	.....	.....
Onion sets	66,000,000	59,000,000	43,000,000	518,912	233,400	358,424	.....	.....	.....
Parsley	222,000	230,000	230,000	13,338	9,406	5,258	*58,494	*66,494	*37,625
Parsnip	355,000	242,000	296,000	39,216	16,733	10,422	42,819	7,065	64,819
Peas—Garden	75,000,000	63,000,000	69,000,000	4,821,788	2,713,101	7,289,225	.....	.....	.....
Pepper	115,000	67,000	56,000	739	931	851	7,022	21,884	4,962
Pumpkin	435,000	400,000	420,000	3,958	2,894	2,487	.....	.....	.....
Radish (Imported)	140,000	170,000	285,000	.....	.....	.....	111,580	102,735	119,475
Radish (Domestic)	2,750,000	1,490,000	1,640,000	403,887	104,048	59,065	.....	.....	.....
Salsify	58,000	89,000	54,000	5,311	18,124	2,805	.....	.....	.....
Spinach (Imported)	403,000	515,000	1,000,000	.....	.....	.....	701,832	804,789	634,100
Spinach (Domestic)	2,000,000	650,000	250,000	35,752	9,216	1,992	.....	.....	.....
Squash—Summer	241,000	230,000	230,000	2,765	2,789	2,872	.....	.....	.....
Squash—Winter	250,000	250,000	250,000	2,649	2,950	2,545	.....	.....	.....
Sweet corn	17,000,000	12,500,000	14,700,000	369,622	409,225	215,187	.....	.....	.....
Tomato	564,000	430,359	385,000	11,500	10,913	5,387	.....	.....	.....
Turnip—English	1,633,000	1,925,000	2,070,000	5,688	92,305	6,841	†1,563,173	†2,150,965	†1,066,001
Turnip—Swede	317,000	365,000	480,000	45,382	25,990	10,514	.....	.....	.....
FIELD SEEDS									
CLOVERS:									
Red clover	84,000,000	104,000,000	108,000,000	4,500,917	7,286,211	2,574,583	1,050,900	768,300	5,343,600
Alsike clover	34,500,000	34,000,000	24,000,000	1,838,130	2,689,967	2,327,992	7,031,800	3,528,200	4,329,000
White clover	3,500,000	4,100,000	2,600,000	726,788	495,354	83,351	700	52,700	157,800
Crimson clover	4,500,000	4,700,000	8,800,000	.....	2,137	1,574	1,483,500	1,603,000	5,776,300
Sweet clover	12,500,000	5,500,000	6,100,000	19,190	6,108	12,480	**941,189	.....	.....
Bur clover	239,000	328,000	360,000	.....	.....	.....	.....	.....	.....
LESPEDEZA	516,000	635,000	1,430,000	.....	.....	.....	.....	.....	.....
ALFALFA	53,000,000	45,000,000	52,000,000	316,425	846,495	2,986,208	770,400	44,700	3,169,600
GRASSES:									
Timothy	234,000,000	180,000,000	233,000,000	11,520,753	8,520,173	15,139,913	154,600	22,400	4,400
Redtop	25,500,000	20,000,000	25,000,000	243,125	169,010	406,358	5,000	2,200	1,000
Orchard grass	6,700,000	6,700,000	5,750,000	467,479	793,240	115,420	177,200	57,600	1,286,300
Kentucky bluegrass	11,650,000	12,700,000	14,400,000	438,421	143,757	459,612	.....	.....	.....
Bermuda grass	176,000	200,000	120,000	500	.....	.....	.....		
Bromus inermis	634,000	370,000	790,000	10,941	10,000	18,000	.....	.....	.....
Meadow fescue	1,110,000	1,500,000	2,500,000	503,364	602,693	764,549	.....	.....	.....
VETCHES:									
Common vetch	3,850,000	4,600,000	5,000,000	33,946	179,750	11,810	435,200	117,600	29,900
Hairy vetch	1,630,000	2,500,000	1,500,000	750	300	748	256,500	231,200	295,600
MILLETS:									
Golden millet	29,500,000	35,000,000	41,500,000	684	55,994	77,315	.....	.....	.....
Common millet	16,690,000	14,350,000	7,750,000	274,878	109,120	199,336	.....	.....	.....
Siberian millet	7,440,000	5,877,000	9,350,000	55,200	1,680	544	.....	.....	.....
Hungarian millet	2,240,000	600,000	1,450,000	22,396	2,969	6,504	138,300	9,000	259,500
Japanese millet	3,160,000	3,250,000	3,500,000	9,718	30,917	11,765	.....	.....	.....
Broom-corn millet	16,240,000	7,400,000	5,700,000	15,798	9,779	2,272	.....	*1,583,700	*786,400
SORGOS:									
Amber sorgo	43,000,000	30,000,000	43,000,000	13,701	.....	.....	.....	.....	.....
Orange sorgo	16,000,000	14,000,000	18,000,000	2,332	.....	.....	.....	.....	.....
Sumac sorgo	13,600,000	16,000,000	20,000,000	.....	.....	.....	.....	.....	.....
All other sorgos	4,950,000	3,500,000	2,500,000	.....	.....	.....	.....	.....	.....
SUDAN GRASS	6,800,000	4,000,000	2,000,000	7,289	.....	11,073		.....	.....
RAPE (for sowing)	9,700,000	15,000,000	15,000,000	177,333	159,325	182,841	*639,000	*11,316,300	*2,285,700

*Figures given include seed imported and used for both planting and other purposes.
†Import figures for English turnip include Swede turnip.
**White flower sweet clover imported from Canada.

SOME OF THE SERVICES RENDERED BY FIELD SEEDSMEN.

George C. Edler, Investigator in Seed Marketing.

Seeds are important to the farmer and gardener because he is always a consumer of seeds and often at the same time a producer of certain kinds of seeds for market. The relationship of the seedsman to the farmer or gardener therefore is both that of a buyer and a seller. In giving consideration to the services rendered by seedsmen to tillers of the soil this relationship should be borne in mind. This article will consider almost entirely the field seedsman who deals mostly in forage crop seeds such as the grasses, clovers, millets and forage sorghums, and it applies particularly to the specialized seedsman rather than to the dealer who acts merely as a broker, or who conducts the seed business as an incidental side line to some other more prominent line. Some of the services rendered by the field seedsman are likewise rendered by the vegetable seedsman, but generally not in the same way.

Seedsmen's Business of Great Economic Importance.—The percentage of all kinds in the aggregate of field seeds planted each year that passes through the hands of field seedsmen is small as compared with the total quantity planted annually, but this small percentage is of great economic importance. In the case of grass and clover seed, however, the percentage of the annual planting requirements that is handled by seedsmen is not small, as shown in an inquiry conducted a short time ago by the Bureau of Markets Seed Reporting Service. From the results of that inquiry it was learned that in the leading grass and clover seed producing States only about one-fourth of the grass and clover seed planted is produced normally on the farm where used and about one-sixth is obtained normally by the farmer who plants it directly from other farmers. Somewhat more than one-half is obtained normally from dealers in these grass and clover-seed-producing States. In other States which normally produce little or none of these seeds more than three-fourths is obtained normally from dealers. While this inquiry indicated that the larger part of the grass and clover seed planted annually passes through the hands of the dealer, it also indicated that the proportion of seeds of cereals and cotton handled by dealers was small. Because of the large quantities of these latter seeds that are planted annually, and which are handled in such relatively small quantities by dealers, the rather large percentage of grass and clover seed handled by dealers is offset and the percentage of all field seeds handled by them remains rather small.

No figures are available at this time showing conclusively the percentage of seed that the farmer obtains from the dealer which has already passed through the hands of the seedsman. Some figures (published in the Seed Reporter for September, 1918), however, have been obtained showing the estimated sales by dealers (mostly seedsmen) of some of the important kinds of field seeds but because of the duplication in these figures (sales of seeds between seedsmen), it is impossible to arrive at accurate figures from which to make calculations. It would seem to be conservative to say that one-half to three-fourths of the seed handled by local shippers and dealers in leading grass and clover-seed-producing sections passes into the hands of seedsmen and in sections which do not produce seed that at least four-fifths of the seed handled by the local dealer or merchant is obtained from seedsmen. It would appear from these latter and the foregoing figures which have been mentioned that the seedsmen handle approximately one-half of the grass and clover seeds which are planted each year. Because grasses and clovers occupy so prominent a place in the agriculture of this country and because their seeds are handled so extensively by seedsmen, it is important to consider what services are rendered by seedsmen.

Enumeration of Services Rendered by Seedsmen.—Some of the services rendered by field seedsmen stated briefly are as follows: (1) seedsmen offer a cash market for seeds at harvest time as well as at any other time; (2) they assume the risk of a declining market and absorb overhead expenses—storage, insurance, interest, etc.—incidental to carrying stocks of seed from harvest time to or beyond planting time; (3) they usually have better facilities for recleaning, sacking, storing, and testing seeds than farmers have, hence are able to offer purer and better-packed seeds; (4) they enable the seed consumer to delay purchases until he can determine more accurately from prices ruling on various agricultural products during the spring, together with soil and climatic conditions at that time, the kinds and quantities of seeds which are most likely to result in the greatest profit to him; (5) their warehouses serve as an emergency storehouse or seed-bank from which seeds of regular or catch crops may be obtained quickly for immediate planting; and (6) they frequently tide over current shortages of certain kinds of seeds by carrying over stocks from the preceding year or years. To these services might be added two more that are conducted, however, more by vegetable seedsmen than by field seedsmen, namely, (1) the dissemination in catalogues and circulars issued by them of valuable cultural and varietal information of various crops, and (2) the introduction and stimulation of the commercial production of new or little-tried kinds or varieties of seeds which have in the past proved to be of considerable value to the agriculture of this country.

Seedsmen Offer Cash Market for Seeds.—The majority of farmers are unwilling to purchase seed for spring planting at the time the seed is harvested, which is usually late summer or early fall. The farmer who grows seed for market usually wishes to dispose of his seed at harvest time or shortly thereafter for cash, and frequently the only outlet for it—at least the main one—is the seedsman. The grower may sell it to the seedsman through correspondence or he may sell to a traveling or local representative of a seedsman. Though the ways of consummating sales of seed to seedsmen vary in different localities, the practice of paying cash to the farmer for his seed is rather uniform with seedsmen in most localities.

Seedsmen Assume Risk of Declining Market.—The price of seeds fluctuates considerably with the supply and demand and other factors. By no means can the seedsman be assured that the seeds he buys in the fall will advance sufficiently in price before he can dispose of them to cover storage, insurance, interest, handling, and other charges and leave a fair margin of profit. He must assume the risk of a declining market unless he sells the seed at the same time that he buys it. It is true, of course, that he often benefits from an advancing market but if the price of seeds in the spring was uniformly more than enough to cover storage, handling, and other charges incurred during the fall and winter, more merchants and farmers would make their purchases from seedsmen in the fall and winter.

Seedsmen Offer Purer and Better-packed Seeds.—The seedsman can afford to have, and usually does have, better facilities for recleaning, sacking, storing, and testing seeds than are available to the farmer and he is in a position to furnish better grades of seeds in better containers. By means of the batteries of modern seed cleaning machinery, the seedsman is able to remove practically every impurity from seeds and to separate the inferior, shriveled, light-weight seed from the plump, heavy-weight seed. Probably most grass and clover seeds that are sold by farmers to their neighbors or used on their own farms have not received any further cleaning than that obtained in the operation of threshing or hulling, whereas most of the seed sold by seedsmen is recleaned one or more times. To accomplish the removal of certain kinds of weed seeds and other impurities from seeds for planting often requires extensive and complicated machinery and equipment which a farmer or small grower could not afford to maintain for this special purpose. The seedsman is careful to use a bag free from holes and of sufficient weight to contain his seed for safe storage and subsequent shipment. The damage to seeds from rodents, rain, snow, etc., in a seedsman's warehouse is probably less than in the granary or barn on the farm. The progressive seedsman has a laboratory in which to test his seeds for purity and germination. He can determine by means of these tests whether or not certain lots of seed are suitable for planting purposes.

Seedsmen Enable Farmers to Defer Seed Purchases.—Frequently it is very difficult for the farmer to determine the kinds of crops and acreage of each to grow in a given year. A sluggish market throughout the fall and winter for a certain commodity, loss of livestock during the winter, small increase of livestock during the spring, too much or too little rain, and late spring frosts are some of the many factors that must be considered by the farmer in choosing those kinds of crops which would seem to be most profitable to plant in the spring. If he is able to delay making his seed purchases until these factors are known to him, he can buy seed of the right kinds and in proper quantities from seedsmen direct or from them indirectly through the local merchants. It must be remembered, however, that late seed purchases on the part of the farmer are attendant with drawbacks that may outweigh the apparent advantages of his being in a better position in the spring to know his seed requirements, and that it is not generally advisable to wait until the last minute to obtain seed.

Seedsmen Afford Emergency Source of Seed Supplies.—There may be more seed of a given kind than is necessary to plant in a given year, but it may be mostly in the hands

of growers and country shippers and thus not available for quick distribution to farmers in other sections. The seedsman's warehouse serves as an emergency seed storehouse or seed-bank from which seeds of regular or catch crops may be withdrawn quickly and are ready for planting immediately. Seed corn and seed oats in the crib or granary on the farm that may have been viable in the fall may have been injured during the winter by severe freezes and may have become unfit for planting purposes, and the injury not discovered until too late to drive through the country in search of seed. Or the farmer may have replanted his corn several times, and, failing to get a stand, may have decided to plant millet, buckwheat, or some other catch crop instead. Fortunately for the farmer there probably is a seedsman who either has or is in touch with sources of supply of the kind of seed desired and whose location at some central point is such that quick shipment may be made.

Seedsmen Carry Over Important Seed Stocks.—Seedsmen frequently tide over current shortages of certain kinds of seed by carrying over stocks of them from the preceding year or years. This carry-over, though usually small as compared with the total planting requirements, occasionally serves as the balance wheel in preventing or decreasing violent price fluctuations. It often is of equal importance or of greater importance than the size of the current season's crop. The large carry-over of timothy seed from the crops of 1914-17, together with the disappointing export demand, in the fall of 1918 and the spring of 1919, apparently had more effect upon the timothy seed market than the production of the 1918 crop. Likewise the small carry-over of red clover seed in 1918 seemed to be of as much concern as the decreased production of that seed in 1918. The carry-over of some seeds commonly planted in large quantities in the fall is frequently the principal source from which the earliest plantings are made.

Conclusion.—Some of the services that seedsmen render have been pointed out rather specifically without attempting to show what general results have been accomplished through their agency. An enumeration and discussion of the results would go beyond the scope of this article. A careful analysis of the services outlined will suggest the natural sequence or result of each of the services.

Seedsmen have been and probably will continue to be the main connecting link between widely separated areas of seed production and seed consumption. The interim between seed harvest time and planting time is very short, hence seeds must be handled as expeditiously as possible.

Only a small percentage of the farmers are producers of grass and clover or other forage crop seeds for market, but the percentage of consumers of these seeds to the total number of farmers is large. Of the small percentage of farmers who produce these seeds in a given year not many make a practice of producing them each and every year. For most farmers as well as for most country merchants seeds are a side-line and for that reason, as well as for other reasons, not so much attention is paid to the marketing of this commodity. The seedsman's main stock in trade is seeds, hence it is he who is best fitted to bridge the gap between the seed grower and the seed consumer. The unscrupulous methods used by some seedsmen should not affect and probably never have affected seriously the general reputation of the seed trade as a whole.

SEED WHEAT AND SEED OAT SITUATION IN THE NORTHERN GREAT PLAINS.

C. W. Warburton, Agronomist,
Office of Cereal Investigations, Bureau of Plant Industry.

The severe drouth and extreme heat during the late spring and summer of 1919 greatly reduced crop yields in Montana, western North Dakota, southwestern Saskatchewan, and southern Alberta, with a resultant scarcity of seed grain throughout this region. In northern Iowa, Minnesota, eastern South Dakota, eastern North Dakota, and Manitoba the quality and yield of the spring wheat crop were severely damaged by scab, rust, and other diseases, while other grain crops were not up to the usual standard. In view of these facts a review of the seed situation in the northern Great Plains seems desirable.

Spring wheat was sown in 1919 on 638,000 acres in Iowa; 3,805,000 acres in Minnesota; 3,796,000 acres in South Dakota; 7,304,000 acres in North Dakota, and 1,518,000 acres in Montana. In view of the lessened urgency in the demand for wheat production in 1920 and the unsatisfactory returns from the spring-sown crop in Iowa and southern Minnesota, it is probable that there will be a considerable reduction in the wheat acreage there next spring. A material reduction in the rye acreage sown in North Dakota this fall as compared with a year ago is likely, and at least a part of this land will be sown to wheat next spring, so that the North Dakota wheat acreage probably will equal that of 1919. Conditions in Montana were generally quite favorable for spring wheat seeding in 1919, and the acreage put in will hardly be more than equalled in 1920.

Abundant supplies of seed wheat are available in Minnesota, South Dakota, and eastern North Dakota, but there will no doubt be some demand for seed from outside sources because of the poor quality of the crop, due to scab and rust damage. In North Dakota west of the Missouri River, where about 1,200,000 acres are sown to spring wheat, and in Montana with about 1,500,000 acres, there will be a strong demand for seed wheat, as crop failures were general and many farmers are entirely without seed. In northwestern North Dakota, except in portions of Rolette, Bottineau, Pierce, and McHenry counties, fair yields of good quality generally were produced, and there will be some surplus for other sections. A shortage in the counties just named can be supplied readily from sections either to the east or to the west.

In North Dakota some seed wheat of excellent quality will be available in the section from Minot north to the Canadian line and west to the Montana line. By far the best crop in the State, however, is in the northeastern counties in the section from Devils Lake to Grand Forks and north to the Canadian line. The rust epidemic was much less severe here than it was further south, and both quality and yield were far above other sections of the State. Good seed wheat is also available in the portion of the Red River Valley in Minnesota east and north from Grand Forks.

Crop failures were general in southern Alberta to as far north as Calgary, north of which point fair yields of good quality were produced. Southwestern Saskatchewan also had a general crop failure, though conditions were somewhat less severe than in southern Alberta. From Calgary to Edmonton the wheat was of good quality, but yields were light. In the vicinity of Edmonton yields were good, but this is not a large wheat-growing region. In the Peace River section in northern Alberta it is probable that about 1,000,000 bushels of excellent wheat will be available, as conditions were favorable and the crop ripened without frost injury. Plentiful supplies of seed wheat are available in southeastern Saskatchewan, in the section from Estevan to Moose Jaw, thence northeast to within about 50 miles of Saskatoon, and north to the Carrot River.

The seed oat situation is similar to that just described for wheat, though local supplies of seed oats in western North Dakota, Montana, and southern Alberta are much less abundant than those of seed wheat, and practically the entire crop will have to be sown with seed obtained from other sections. As approximately 1,000,000 acres of oats are sown annually in western North Dakota and 680,000 acres in Montana, at least 3,000,000 bushels of seed oats will be required for this section. A part of this seed will be available locally, particularly in northwestern North Dakota, but a large part of it will have to come from outside sources. The best available seed supply in nearby States is probably in northwestern Minnesota, northeastern North Dakota, and in southeastern South Dakota where sufficient corn is grown to keep down wild oats. There is an abundant supply of excellent seed oats in northwestern Saskatchewan and in northern Alberta.

Mr. George H. Clark, Seed Commissioner for the Canadian Department of Agriculture, estimates that probably 2,000,000 bushels of Canadian Standard No. 1 and No. 2 white seed oats, consisting of Banner and Abundance varieties, are available in addition to the supply needed for the Canadian demand. He states that seed oats and seed wheat are now being stored and cleaned in Saskatchewan and Alberta, and that unquestionably a sufficient supply will be available if orders are placed early. No. 1 seed grain in Canada must be at least 95 per cent of one variety or type; must be reasonably free from other kinds of grain; must contain not more than 1 seed of noxious weeds to the pound; must be well cleaned and graded, sound and of good color; must weigh not less than the standard weight per measured bushel, and must germinate at least 80 per cent. No. 2 seed oats and seed barley are similar to No. 1, except that they may contain not to exceed 10 wild oats to the pound.

In summary, it appears that there are abundant supplies of seed wheat and seed oats of suitable quality for sowing in the spring wheat belt in 1920, but in order to obtain the best seed, it is desirable that orders be placed early so that the probable demand may be anticipated and good lots retained as they are marketed.

ESTIMATED SEED REQUIREMENTS AND SOURCES OF SEED SUPPLY.

The total quantity of seed required for planting various field crops, and the percentage of this quantity that is obtained from dealers, the percentage obtained from other farmers, the percentage retained for planting on farm where produced are figures of more or less general interest always and are of considerable value to those agencies handling seeds for planting purposes. As it is practically impossible to obtain accurate data, the best figures obtainable are conservative estimates made by the best informed and most reliable agencies. In this connection attention is called to an article on page five of the Seed Reporter for July 12, 1919, entitled "Sources of Field Seed for Planting," accompanied by a table showing for the grasses, clovers and alfalfa, and small grains, the estimated percentage of seed planted that is produced on farm where used, obtained directly from other farmers, and obtained from dealers. At that time it was planned that the complete published reports should include, not only the percentage of seed obtained from each of the three general sources of seed supply for each State, but also, so far as possible, the approximate quantities of seed covered by such percentages of the total quantity of seeds used.

Satisfactory data are not available at this time upon which to base estimates of the total quantity of seed required of the grasses, clovers and alfalfa, field peas (except cowpeas), millets, and forage sorghums.

In the accompanying tables, giving for corn, small grains, beans-all dry edible, peanuts, potatoes, grain sorghums, cowpeas, soy beans, and cotton, the estimated total seed requirements and the estimated quantity and percentage that is produced on farm where used, obtained from other farmers, and obtained from dealers, the figures given for total quantity of seed planted were computed on a basis of the estimated acreage planted in 1918 and the estimated average quantity of seed sown per acre, most of which data being furnished by the Bureau of Crop Estimates. The percentage figures in each case are the results of an extensive inquiry made recently by the Bureau of Markets Seed Reporting Service to obtain this special information.

The table for small grains includes the total of spring and winter varieties of wheat, oats, rye, and barley and the percentage figures given apply to the average or total of these four grains and not necessarily to any one of them. In the table for potatoes and beans—all dry edible, the figures given for total quantity of seed planted include only that required for planting the commercial acreage and do not include the

ESTIMATED TOTAL SEED REQUIREMENTS AND THE ESTIMATED PERCENTAGE AND QUANTITY THAT ARE OBTAINED FROM EACH OF THE THREE GENERAL SOURCES OF SUPPLY.

CORN

State.	Total quantity seed planted	Seed planted that was produced on farm where used		Seed planted that was obtained from other farmers		Seed planted that was obtained from dealers	
	Bushels	%	Bushels	%	Bushels	%	Bushels
Maine ..	6,800	31	2,100	12	800	57	3,900
Vermont	11,300	21	2,400	12	1,300	67	7,600
N. H. ...	7,000	36	2,500	11	800	53	3,700
Mass. ..	10,400	46	4,800	18	1,900	36	3,700
Conn. ...	9,900	44	4,300	18	1,800	38	3,800
R. I. ...	3,500	45	1,600	8	300	47	1,600
N. Y. ...	205,000	36	73,800	15	30,800	49	100,400
N. J. ..	53,300	60	32,000	19	10,100	21	11,200
Pa.	345,400	60	207,200	13	44,900	27	93,300
DIV. 1	**652,600**	**51**	**330,700**	**14**	**92,700**	**35**	**229,200**
Md.	115,100	72	82,900	15	17,300	13	14,900
Del.	46,200	83	38,300	14	6,500	3	1,400
Va.	407,100	76	309,400	14	57,000	10	40,700
W. Va. .	165,700	73	121,000	17	28,100	10	16,600
N. C. ...	749,800	78	584,800	13	97,500	9	67,500
S. C. ..	542,400	80	433,900	9	48,800	11	59,700
DIV. 2	**2,026,300**	**77**	**1,570,300**	**13**	**255,200**	**10**	**200,800**
Tenn. ..	562,500	77	433,100	14	78,800	9	50,600
Ga.	737,700	83	612,300	9	66,400	8	59,000
Fla.	125,700	47	59,100	12	15,100	41	51,500
Ala.	885,800	79	699,800	10	88,600	11	97,400
Miss. ...	954,100	75	715,600	10	95,400	15	143,100
DIV. 3	**3,265,800**	**77**	**2,519,900**	**11**	**344,300**	**12**	**401,600**
Mich. ..	301,900	51	154,000	15	45,300	34	102,600
Ohio ...	601,200	74	444,900	16	96,200	10	60,100
Ind. ...	715,600	73	522,400	16	114,500	11	78,700
Ill.	1,467,300	70	1,027,100	13	190,800	17	249,400
Ky.	578,600	73	422,400	15	86,800	12	69,400
DIV. 4	**3,664,600**	**70**	**2,570,800**	**15**	**533,600**	**15**	**560,200**
Wis. ...	272,900	55	150,100	15	40,900	30	81,900
Minn. ..	412,500	59	243,400	17	70,100	24	99,000
N. Dak.	86,400	22	19,000	15	13,000	63	54,400
S. Dak. .	465,900	61	284,200	23	107,200	16	74,500
DIV. 5	**1,237,700**	**56**	**696,700**	**19**	**231,200**	**25**	**309,800**
Iowa ...	1,471,900	79	1,162,800	13	191,300	8	117,800
Mo.	896,400	66	591,600	18	161,400	16	143,400
Neb.	981,000	71	696,500	19	186,400	10	98,100
Kans. ..	799,100	56	447,500	20	159,800	24	191,800
DIV. 6	**4,148,400**	**70**	**2,898,400**	**17**	**698,900**	**13**	**551,100**
Ark.	530,400	65	344,800	25	132,600	10	53,000
Okla. ...	406,300	45	182,800	20	81,300	35	142,200
Texas ..	1,355,400	39	528,600	13	176,200	48	650,600
La.	429,400	68	292,000	8	34,300	24	103,100
DIV. 7	**2,721,500**	**49**	**1,348,200**	**16**	**424,400**	**35**	**948,900**
Wyo. ...	11,100	6	700	12	1,300	82	9,100
Colo. ...	84,700	48	40,700	22	18,600	30	25,400
Utah ...	5,300	25	1,300	40	2,100	35	1,900
N. Mex.	24,300	40	9,700	30	7,300	30	7,300
DIV. 8	**125,400**	**42**	**52,400**	**23**	**29,300**	**35**	**43,700**
Mont. ..	18,400	24	4,400	18	3,300	58	10,700
Idaho ..	5,800	30	1,700	19	1,100	51	3,000
Wash. ..	7,700	33	2,500	9	700	58	4,500
Ore.	11,800	31	3,700	19	2,200	50	5,900
DIV. 9	**43,700**	**28**	**12,300**	**17**	**7,300**	**55**	**24,100**
Calif. ...	18,200	37	6,700	18	3,300	45	8,200
Nev. ...	500	34	200	34	200	32	100
Ariz. ...	8,500	50	4,200	28	2,400	22	1,900
DIV. 10	**27,200**	**41**	**11,100**	**22**	**5,900**	**37**	**10,200**
U. S.	**17,913,200**	**67**	**12,010,800**	**15**	**2,622,800**	**18**	**3,279,600**

BEANS—ALL DRY EDIBLE

	Pounds	%	Pounds	%	Pounds	%	Pounds
Maine .	*560,000	43	241,000	3	17,000	54	302,000
Vt.	*138,000	24	33,000	1	1,000	75	104,000
N. H. ..	*165,000	79	130,000	5	8,000	16	27,000
N. Y. ..	13,800,000	36	4,968,000	11	1,518,000	53	7,314,000
Mich. .	24,978,000	63	15,736,000	13	3,247,000	24	5,995,000
Wis. ...	*720,000	37	267,000	12	86,000	51	367,000
Minn. ..	*325,000	38	124,000	13	42,000	49	159,000
Colo. ..	18,144,000	70	12,701,000	19	3,447,000	11	1,996,000
N. Mex.	5,364,000	57	3,057,000	15	805,000	28	1,502,000
Calif. ...	†26,640,000	41	10,922,000	17	4,529,000	42	11,189,000
Ariz. ...	1,170,000	66	772,000	17	199,000	17	199,000
U. S.	**92,004,000**	**53**	**48,951,000**	**15**	**13,899,000**	**32**	**29,154,000**

*Based on 1915 acreage.
†Includes 2,500,000 pounds blackeye cowpeas or beans.

SMALL GRAINS (ALL WHEAT, OATS, RYE AND BARLEY)

State.	Total quantity seed planted	Seed planted that was produced on farm where used		Seed planted that was obtained from other farmers		Seed planted that was obtained from dealers	
	Bushels	%	Bushels	%	Bushels	%	Bushels
Maine ..	493,000	34	168,000	8	39,000	58	286,000
Vt.	402,000	40	160,800	11	44,200	49	197,000
N. H. ..	62,000	17	10,500	11	6,800	72	44,700
Mass. ..	34,000	7	2,400	13	4,400	80	27,200
Conn. ..	70,000	19	13,300	15	10,500	66	46,200
R. I. ...	8,000	25	2,000	8	600	67	5,400
N. Y. ..	4,132,000	61	2,521,000	17	702,000	22	909,000
N. J. ...	451,000	52	234,000	11	50,000	37	167,000
Pa.	5,895,000	72	4,245,000	13	766,000	15	884,000
DIV. 1	**11,547,000**	**64**	**7,357,000**	**14**	**1,623,500**	**22**	**2,566,500**
Md. ...	1,328,000	72	956,000	15	199,000	13	173,000
Del. ...	232,000	79	183,300	15	34,800	6	13,900
Va.	2,338,000	71	1,660,000	13	304,000	15	374,000
W. Va. .	847,000	61	517,000	17	144,000	22	186,000
N. C. ...	1,769,000	51	902,000	16	283,000	33	584,000
S. C. ...	1,231,000	35	431,000	16	197,000	49	603,000
DIV. 2	**7,745,000**	**60**	**4,649,300**	**15**	**1,161,800**	**25**	**1,933,900**
Tenn. ..	1,531,000	62	949,000	18	276,000	20	306,000
Ga.	1,573,000	47	739,000	18	283,000	35	551,000
Fla.	80,000	12	9,000	7	6,000	81	65,000
Ala.	953,000	34	324,000	15	143,000	51	486,000
Miss. ...	500,000	24	120,000	13	65,000	63	315,000
DIV. 3	**4,637,000**	**46**	**2,141,000**	**17**	**773,000**	**37**	**1,723,000**
Mich. ..	6,453,000	72	4,646,000	15	968,000	13	839,000
Ohio. ..	8,399,000	77	6,467,000	14	1,176,000	9	756,000
Ind.	8,487,000	78	6,620,000	15	1,273,000	7	594,000
Ill.	16,178,000	78	12,619,000	14	2,265,000	8	1,294,000
Ky.	1,977,000	57	1,127,000	15	296,000	28	554,000
DIV. 4	**41,494,000**	**76**	**31,479,000**	**14**	**5,978,000**	**10**	**4,037,000**
Wis.	8,851,000	81	7,169,000	12	1,062,000	7	620,000
Minn. ..	17,353,000	81	14,056,000	13	2,256,000	6	1,041,000
N. Dak. .	19,697,000	82	16,151,000	13	2,561,000	5	985,000
S. Dak. .	12,865,000	84	10,807,000	13	1,672,000	3	386,000
DIV. 5	**58,766,000**	**82**	**48,183,000**	**13**	**7,551,000**	**5**	**3,032,000**
Iowa ...	18,793,000	80	15,034,000	14	2,631,000	6	1,128,000
Mo.	7,355,000	69	5,075,000	21	1,545,000	10	735,000
Neb.	12,392,000	77	9,542,000	15	1,859,000	8	991,000
Kans. ...	15,132,000	71	10,744,000	15	2,270,000	14	2,118,000
DIV. 6	**53,672,000**	**75**	**40,395,000**	**16**	**8,305,000**	**9**	**4,972,000**
Ark.	1,078,000	35	377,300	17	183,300	48	517,400
Okla. ...	6,066,000	55	3,336,300	17	1,031,200	28	1,698,500
Texas ...	4,129,000	36	1,486,000	13	537,000	51	2,106,000
La.	150,000	24	36,000	4	6,000	72	108,000
DIV. 7	**11,423,000**	**46**	**5,235,600**	**15**	**1,757,500**	**39**	**4,429,900**
Wyo. ...	1,148,000	67	769,000	13	149,000	20	230,000
Colo. ...	1,973,000	65	1,283,000	18	355,000	17	335,000
Utah. ..	779,000	83	647,000	13	101,000	4	31,000
N. Mex.	343,000	47	161,000	24	82,000	29	100,000
DIV. 8	**4,243,000**	**66**	**2,860,000**	**17**	**687,000**	**17**	**696,000**
Mont. ..	4,871,000	71	3,458,000	17	828,000	12	585,000
Idaho ..	2,096,000	67	1,404,000	12	252,000	21	440,000
Wash. .	4,254,000	67	2,850,000	11	468,000	22	936,000
Ore. ...	2,738,000	63	1,725,000	15	411,000	22	602,000
DIV. 9	**13,959,000**	**68**	**9,437,000**	**14**	**1,959,000**	**18**	**2,563,000**
Calif. ...	3,626,000	56	2,030,000	19	689,000	25	907,000
Nev. ...	114,000	52	59,000	15	17,000	33	38,000
Ariz. ...	106,000	50	53,000	17	18,000	33	35,000
DIV. 10	**3,846,000**	**56**	**2,142,000**	**19**	**724,000**	**25**	**980,000**
U. S.	**211,332,000**	**73**	**153,878,900**	**14**	**30,519,800**	**13**	**26,933,300**

PEANUTS

	Pounds	%	Pounds	%	Pounds	%	Pounds
Va.	4,725,000	48	2,268,000	13	614,000	39	1,843,000
N. C. ...	3,800,000	54	2,052,000	13	494,000	33	1,254,000
S. C. ...	375,000	42	158,000	12	45,000	46	172,000
Tenn. ...	1,025,000	39	400,000	12	123,000	49	502,000
Ga.	8,325,000	53	4,412,000	13	1,082,000	34	2,831,000
Fla. ...	3,175,000	32	1,016,000	17	540,000	51	1,619,000
Ala.	16,250,000	70	11,375,000	16	2,600,000	14	2,275,000
Miss. ..	150,000	70	105,000	12	18,000	18	27,000
Mo.	10,000	13	1,000	13	1,000	74	8,000
Ark. ...	500,000	48	240,000	17	85,000	35	175,000
Okla. ...	250,000	20	50,000	14	35,000	66	165,000
Texas ...	18,450,000	43	7,934,000	15	2,767,000	42	7,749,000
La.	125,000	62	78,000	9	11,000	29	36,000
U. S.	**57,160,000**	**52**	**30,089,000**	**15**	**8,415,000**	**33**	**18,656,000**

quantity required for planting in home gardens, which is relatively large in some States. No figures are given for California in the table for cowpeas, although about 2,500,000 pounds of the blackeye variety of cowpeas were required for planting the 1918 acreage in that State. Because blackeye cowpeas are used largely in the dry state for food purposes, and are referred to in some sections and by some agencies as "Beans," they are included, for the State of California, in the table for "Beans—all dry edible."

It will be noted that, for cowpeas, soy beans, beans—all dry edible, and grain sorghums, especially the last two named, figures are not given for all States. Although these crops may be grown more or less extensively in some States not given, it is thought that the quantity of seed required for planting is relatively small. In any State where a crop is relatively unimportant commercially and is grown in small and widely-scattered areas, it is difficult to obtain reliable estimates of total acreage which must be used as the principal basis for computing the total seed requirements. The total requirements and average percentages for the United States given in these cases are based upon the totals and averages for the States given and do not include the less important States omitted from the table.

The figures, especially those relating to the percentage and quantity obtained from dealers, serve to indicate the relative commercial importance of the various kinds of seeds in each State. The figures showing the estimated percentage and quantity of seed produced on farm where used, in other words, retained for planting on farm where produced, should indicate in a measure the relative importance of each State as a producer of each kind of seed. This does not mean, however, that seed not produced on farms where used necessarily is obtained from other States.

ESTIMATED TOTAL SEED REQUIREMENTS AND THE ESTIMATED PERCENTAGE AND QUANTITY THAT ARE OBTAINED FROM EACH OF THE THREE GENERAL SOURCES OF SUPPLY.

POTATOES—IRISH

State	Total quantity seed planted	Seed planted that was produced on farm where used		Seed planted that was obtained from other farmers		Seed planted that was obtained from dealers	
	Bushels	%	Bushels	%	Bushels	%	Bushels
Maine ..	1,120,000	81	907,000	12	134,000	7	79,000
Vt.	278,000	77	214,000	15	42,000	8	22,000
N. H. ...	210,000	61	128,000	18	38,000	21	44,000
Mass....	374,000	30	112,000	11	41,000	59	221,000
Conn. ...	208,000	38	79,000	15	31,000	47	98,000
R. I. ...	41,000	23	9,000	2	1,000	75	31,000
N. Y. ..	3,040,000	66	2,006,000	19	578,000	15	456,000
N. J. ...	920,000	43	396,000	12	110,000	45	414,000
Pa.	2,989,000	69	2,062,000	17	508,000	14	419,000
DIV. 1	**9,180,000**	**64**	**5,913,000**	**16**	**1,483,000**	**20**	**1,784,000**
Md.	410,000	43	176,000	14	58,000	43	176,000
Del.	83,000	41	34,000	11	9,000	48	40,000
Va.	975,000	55	536,000	14	137,000	31	302,000
W. Va. .	492,000	73	359,000	11	54,000	16	79,000
N. C. ...	243,000	44	107,000	13	32,000	43	104,000
S. C. ...	196,000	46	90,000	10	20,000	44	86,000
DIV. 2	**2,399,000**	**54**	**1,302,000**	**13**	**310,000**	**33**	**787,000**
Tenn. ..	350,000	44	154,000	13	46,000	43	150,000
Ga.	127,000	48	61,000	10	13,000	42	53,000
Fla.	277,000	26	72,000	7	19,000	67	186,000
Ala.	318,000	40	127,000	9	29,000	51	162,000
Miss. ..	88,000	41	36,000	13	12,000	46	40,000
DIV. 3	**1,160,000**	**39**	**450,000**	**10**	**119,000**	**51**	**591,000**
Mich. ...	2,890,000	82	2,370,000	11	318,000	7	202,000
Ohio	1,424,000	68	968,000	14	200,000	18	256,000
Ind.	805,000	64	515,000	12	97,000	24	193,000
Ill.	1,360,000	52	707,000	11	150,000	37	503,000
Ky.	503,000	42	211,000	11	55,000	47	237,000
DIV. 4	**6,982,000**	**68**	**4,771,000**	**12**	**820,000**	**20**	**1,391,000**
Wis. ...	2,685,000	84	2,256,000	11	295,000	5	134,000
Minn. ..	2,933,000	82	2,405,000	14	411,000	4	117,000
N. Dak. .	756,000	83	627,000	14	106,000	3	23,000
S. Dak.	729,000	81	590,000	14	102,000	5	37,000
DIV. 5	**7,103,000**	**83**	**5,878,000**	**13**	**914,000**	**4**	**311,000**
Iowa ..	1,286,000	67	862,000	18	231,000	15	193,000
Mo.	844,000	46	388,000	16	135,000	38	321,000
Neb. ..	968,000	63	610,000	12	116,000	25	242,000
Kans. ..	624,000	26	162,000	9	56,000	65	406,000
DIV. 6	**3,722,000**	**54**	**2,022,000**	**15**	**538,000**	**31**	**1,162,000**
Ark. ...	346,000	24	83,000	13	45,000	63	218,000
Okla. ..	244,000	12	29,000	3	7,000	85	208,000
Texas ..	354,000	10	35,000	3	11,000	87	308,000
La.	473,000	20	95,000	6	28,000	74	350,000
DIV. 7	**1,417,000**	**17**	**242,000**	**6**	**91,000**	**77**	**1,084,000**
Wyo. ..	201,000	69	139,000	12	24,000	19	38,000
Colo. ..	648,000	60	389,000	24	155,000	16	104,000
Utah ..	170,000	79	134,000	19	32,000	2	4,000
N. Mex.	65,000	45	29,000	20	13,000	35	23,000
DIV. 8	**1,084,000**	**64**	**691,000**	**21**	**224,000**	**15**	**169,000**
Mont. ..	499,000	78	389,000	17	85,000	5	25,000
Idaho ..	232,000	74	172,000	17	39,000	9	21,000
Wash. ..	533,000	70	373,000	17	91,000	13	69,000
Ore. ...	475,000	71	337,000	17	81,000	12	57,000
DIV. 9	**1,739,000**	**73**	**1,271,000**	**17**	**296,000**	**10**	**172,000**
Calif. ..	765,000	31	237,000	16	122,000	53	406,000
Nev. ...	72,000	59	42,000	12	9,000	29	21,000
Ariz. ...	44,000	45	20,000	15	7,000	40	17,000
DIV. 10	**881,000**	**34**	**299,000**	**16**	**138,000**	**50**	**444,000**
U. S.	**35,657,000**	**64**	**22,839,000**	**14**	**4,933,000**	**22**	**7,895,000**

GRAIN SORGHUMS—KAFIR, MILO, AND FETERITA

	Pounds	%	Pounds	%	Pounds	%	Pounds
Kans. ..	14,973,000	42	6,289,000	22	3,294,000	36	5,390,000
Okla. ...	10,682,000	36	3,846,000	22	2,350,000	42	4,486,000
Texas ..	11,235,000	35	3,932,000	11	1,236,000	54	6,067,000
Colo. ...	644,000	33	213,000	17	109,000	50	322,000
N. Mex.	1,393,000	36	502,000	22	306,000	42	585,000
Ariz. ...	406,000	40	163,000	21	85,000	39	158,000
U. S.	**39,333,000**	**38**	**14,945,000**	**19**	**7,380,000**	**43**	**17,008,000**

COWPEAS

State	Total quantity seed planted	Seed planted that was produced on farm where used		Seed planted that was obtained from other farmers		Seed planted that was obtained from dealers	
	Pounds	%	Pounds	%	Pounds	%	Pounds
N. J. ..	240,000	2	5,000	2	5,000	96	230,000
Pa.	420,000	12	51,000	2	8,000	86	361,000
Md.	720,000	11	79,000	13	94,000	76	547,000
Va.	18,120,000	23	4,168,000	9	1,631,000	68	12,321,000
W. Va. .	540,000	8	43,000	4	22,000	88	475,000
N. C. ..	9,660,000	55	5,313,000	18	1,739,000	27	2,608,000
S. C. ..	36,000,000	64	23,040,000	18	6,480,000	18	6,480,000
Tenn. ..	8,580,000	50	4,290,000	17	1,459,000	33	2,831,000
Ga.	34,680,000	64	22,195,000	17	5,896,000	19	6,589,000
Fla. ...	13,620,000	28	3,814,000	10	1,362,000	62	8,444,000
Ala. ...	50,340,000	67	33,728,000	21	10,571,000	12	6,041,000
Miss. ..	74,100,000	65	48,165,000	17	12,597,000	18	13,338,000
Ohio. ..	180,000	5	9,000	2	4,000	93	167,000
Ind.	3,840,000	10	384,000	6	230,000	84	3,226,000
Ill.. ...	4,080,000	10	408,000	11	449,000	79	3,223,000
Ky. ...	11,640,000	16	1,862,000	7	815,000	77	8,963,000
Mo. ...	2,280,000	20	456,000	12	274,000	68	1,550,000
Ark. ...	29,580,000	46	13,607,000	22	6,508,000	32	9,465,000
Okla. ...	1,620,000	21	340,000	17	276,000	62	1,004,000
Texas ..	21,720,000	35	7,602,000	8	1,738,000	57	12,380,000
La.	40,620,000	61	24,778,000	8	3,250,000	31	12,592,000
U. S.	**362,580,000**	**54**	**194,337,000**	**15**	**55,408,000**	**31**	**112,835,000**

NOTE:—California blackeye cowpeas for the State of California are included in tables for "Beans—all dry edible."

SOY BEANS

	Pounds	%	Pounds	%	Pounds	%	Pounds
Vt.	*720,000	24	173,000	1	7,000	75	540,000
N. J. ..	180,000	6	11,000	3	5,000	91	164,000
Pa.....	960,000	24	230,000	3	29,000	73	701,000
Md.	180,000	15	27,000	9	16,000	76	137,000
Va.	*3,300,000	29	957,000	7	231,000	64	2,112,000
W. Va.	420,000	29	122,000	5	21,000	66	277,000
N. C. ..	5,640,000	43	2,425,000	16	902,000	41	2,313,000
S. C. ...	540,000	18	97,000	11	60,000	71	383,000
Tenn. ..	3,120,000	24	749,000	14	437,000	62	1,934,000
Miss. ...	3,960,000	33	1,307,000	13	515,000	54	2,138,000
Ohio ...	1,020,000	17	174,000	7	71,000	76	775,000
Ind.	*7,500,000	21	1,575,000	9	675,000	70	5,250,000
Ill.	*1,620,000	13	210,000	9	146,000	78	1,264,000
Ky.	4,440,000	22	977,000	6	266,000	72	3,197,000
Wis. ...	*420,000	37	156,000	12	50,000	51	214,000
Mo. ...	*1,560,000	16	250,000	11	171,000	73	1,139,000
Ark.	1,140,000	8	91,000	7	80,000	85	969,000
U. S.	**36,720,000**	**26**	**9,531,000**	**10**	**3,682,000**	**64**	**23,507,000**

*Figures given are for 1917.

COTTON

	Pounds	%	Pounds	%	Pounds	%	Pounds
Va. ...	2,208,000	47	1,038,000	16	353,000	37	817,000
N. C. ..	60,096,000	69	41,466,000	17	10,216,000	14	8,414,000
S. C. ..	113,120,000	80	90,496,000	13	14,706,000	7	7,918,000
Tenn. ..	36,096,000	70	25,267,000	13	4,693,000	17	6,136,000
Ga.	187,904,000	80	150,323,000	12	22,549,000	8	15,032,000
Fla.	4,224,000	34	1,436,000	15	634,000	51	2,154,000
Ala. ...	86,272,000	76	65,567,000	11	9,490,000	13	11,215,000
Miss. ..	109,248,000	80	87,398,000	10	10,925,000	10	10,925,000
Mo. ...	4,992,000	23	1,148,000	13	649,000	64	3,195,000
Ark. ...	106,272,000	70	74,390,000	23	24,443,000	7	7,439,000
Okla. ..	58,432,000	46	26,879,000	20	11,686,000	34	19,867,000
Texas ..	251,680,000	56	140,941,000	13	32,718,000	31	78,021,000
La.	59,904,000	76	45,527,000	13	7,788,000	11	6,589,000
Calif. ..	3,488,000	9	314,000	6	209,000	85	2,965,000
Ariz. ..	1,568,000	27	423,000	11	173,000	62	972,000
U. S.	**1,085,504,000**	**69**	**752,613,000**	**14**	**151,232,000**	**17**	**181,659,000**

CANADA ESTABLISHES GRADE STANDARDS FOR SEED GRAIN.

On September 10, 1919, the Canadian Government passed an Order in Council establishing seed grade standards for wheat, oats, barley, and rye; grade standards for flax seed and grade standards for No. 1 seed corn. The seed grades formerly adopted for timothy, red clover, and alfalfa seed were made applicable to the seed of sweet clover, white clover, grasses and millets.

IMPORTATION OF SEED WHEAT AND SEED OATS FROM CANADA

Seed wheat for planting purposes may be imported from Canada, provided an import license (Application for Import License Form Z) is obtained from the United States Wheat Director, 42 Broadway, New York, or from one of his branch offices. There is no import duty on wheat.

There is no embargo on the importation of seed oats from Canada, but there is a duty of six cents a bushel which is the same as that on the importation of oats for any other purpose. This commodity does not come under the jurisdiction of the United States Wheat Director and no import license is required.

VEGETABLE SEED NOTES—CALIFORNIA

The harvest of California vegetable seed crops at this date (September 30) is practically completed. Many fields have been threshed and recleaned. Where the results are actually known, the figures average fairly close to previous estimates, but wherever a difference is shown the figures have a tendency to be lower instead of higher than the earlier estimates. In fact, a majority of the growers have experienced so many disappointments in cleaning the different varieties that they are reluctant to make positive statements until the final results are known.

Climatic conditions throughout the entire growing season were not favorable, and the dry weather had a tendency to mature the crops earlier than usual. Ordinarily this would mean an early clean-up and prompt deliveries, but the shortage of labor caused by the heavy demands for help to handle the fruit crops and other commodities, has hindered seriously the growers, and it is now thought that the clean-up will not be completed so early as usual.

During the last few days of September, light showers fell in the Delta and Santa Clara districts, and nearly an inch of rain fell in southern California. While the rain has been an inconvenience and has caused a little uneasiness among the growers, no serious damage has resulted to date. Many crops are now in the warehouse being recleaned and others are in such shape in the field that they can be protected from the moisture, providing the rain is followed by favorable drying weather.

A great deal of uncertainty exists among the growers regarding the status of next year's business. Many of the seed farmers decline to grow at this season's prices because of the prevailing high cost of labor, equipment and so forth, while the trade in general expect lower prices for next year. Many growers state that ordinary farm products are offering a better prospect, with less expense and care in growing. The sentiment is unanimous that the acreage in practically all kinds will be considerably reduced next season.

Radish.—The radish seed crop will be light this year, possibly 40 to 50 per cent of that of a normal year, or approximately 400 pounds per acre. This agrees with previous estimates, though some growers report as low as a 200-pound average on a large acreage. Fortunately the total acreage planted is large and it is thought that there will be enough seed to allow a small surplus over present contracts.

Onion.—The onion seed crop is holding up fairly well to earlier estimates. Growers report an average yield of from 300 to 400 pounds per acre. Probably 350 pounds is a fair average estimate. Present demands indicate that supplies of the red and white varieties will be fairly well exhausted, but there may be a surplus of some of the yellow varieties.

Parsnip.—While parsnip is yielding below normal, a fair crop of good quality seed will be obtained and there will be enough to meet all demands. Estimates of the average yield range from 700 to 800 pounds per acre.

Tomato.—The tomato seed harvest in southern California is now at its height, and a normal crop is expected. The final results, however, are still uncertain because harvesting often is not complete until early in December and present climatic conditions are not altogether favorable. Quite a heavy rainfall came the last few days in September, and in case the precipitation continues for many days it will occasion considerable loss, both by the rotting of the fruit, which is now on the ground, and by leaf-blight development. If the blight does not develop, the rain will be of considerable value in helping to fill out and mature the late crop.

Beet.—The acreage of garden beet this year is large, but the yield per acre will be much below normal. Estimates and actual figures of recleaned crops average from 650 to 800 pounds per acre. An unusual amount of light seed is being blown out in the recleaning process. Mangel beet is somewhat better, though the yield is not up to normal. Apparently former estimates of 900 to 1,000 pounds are fairly accurate. Sugar beet has fared better than the other beet-seed crops and a normal yield is indicated, although the leaf-hopper has appeared in all sections this season and has proved itself a serious menace to the crops. Swiss chard will be a very light crop.

Carrot.—Judging from the fields that have been threshed and recleaned to date the yield will not exceed the earlier estimates of 700 pounds, and in many cases the average will fall below this quantity because of shrinkage in recleaning. The crop did not start developing until early in May and the dry season caused it to mature early.

Lettuce.—Indications are that the average yield of lettuce will be between 200 and 300 pounds, which is below previous estimates. This crop was severely affected by the unfavorable season. Many growers do not expect over 40 to 50 per cent of a normal crop. However, the acreage is about equal to that of last year and it is thought there will be enough seed to meet present demands.

Squash.—Dry weather throughout the entire growing season, accompanied by a long hot spell in September, has materially affected this crop, and the growers do not expect over 60 to 75 per cent of a normal yield. Possibly the recent showers will prove beneficial and will increase this estimate.

Spinach.—The spinach-seed crop is poor this season. Some of the growers estimate the yield to be as low as 25 per cent of normal. The acreage was considerably reduced. Demand from the trade for this seed is light.

Beans.—It is the concensus of opinion among the growers that seed beans will not be over 60 per cent of a normal crop on a reduced acreage, and some varieties may develop a shortage. Some fields were cut and a few of the early varieties were threshed when the light showers came the last few days of September, but it is thought that the crop will not suffer any serious damage from them.

Garden Peas.—Reports on garden peas run all the way from a total failure to 40 per cent of a normal crop. Stock seed of some varieties probably will be short next season.

Salsify.—A satisfactory yield of good quality salsify seed on a fair acreage was obtained this season. Former estimates of 400 pounds per acre probably are correct.

Sweet Corn.—Only a small acreage of sweet corn for seed is grown in this State, and reports indicate that the crop is in poor condition owing to the unfavorable season.

Pepper.—A normal yield of pepper is indicated.

Cucumber.—Fields of cucumber for seed have developed fairly well this season, and the growers now anticipate nearly a normal yield.

Note. Reports just received (October 8) indicate that since September 30 the rainfall in the principal seed-growing districts in California has been negligible and continued fair weather has prevailed in most sections.

EXPORTS OF CLOVER AND TIMOTHY SEED

From the United States by Countries to Which Exported, for Fiscal Years Ending June 30, 1910-1919, Inclusive
(From Data Obtained From the Bureau of Foreign and Domestic Commerce, of the Department of Commerce.)

(Quantities in pounds)

EXPORTED TO—	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910
CLOVER SEED (All Kinds)										
Denmark	1,877,100	1,049,788	534,913	95,263	959,389	24,690	24,959	.....	64,837	164,676
Germany	.....	.....	.....	.....	10,551	203,171	546,342	378,074	1,551,968	1,970,172
England	2,787,395	2,031,835	1,360,855	1,289,142	1,692,148	438,692	804,792	399,202	987,620	1,789,811
Scotland	1,238,885	2,787,726	761,916	687,920	1,424,252	54,934	425,804	166,921	557,758	889,609
Canada	1,104,476	2,586,886	1,918,005	4,801,731	5,598,542	3,326,952	3,427,579	818,017	925,292	1,338,637
New Zealand	354,823	896,438	581,902	31,312	8,091	514,756	57,324	.....	40,600	191,410
Other countries	407,903	86,641	729,302	210,852	61,091	77,657	120,794	112,468	231,092	633,370
Total	7,770,582	9,439,314	5,886,893	7,116,220	9,750,064	4,640,852	5,407,594	1,874,682	4,359,167	6,977,685
TIMOTHY SEED										
Denmark	1,896,073	137,730	493,405	1,097,165	3,155,180	325,392	1,171,326	454,046	24,064	979,932
France	123,052	.....	100,323	36,666	22,934	120,137	236,269	145,312	62,566	301,080
Germany	.....	.....	.....	.....	449,488	2,156,261	7,057,411	1,286,431	2,392,981	5,856,637
Netherlands	87,766	.....	38,150	.....	215,506	137,828	411,983	.....	12,596	323,426
Russia in Europe	.....	.....	.....	.....	.....	63,730	170,340	102,390	52,420	1,264,659
Sweden	152,276	.....	2,000	95,235	.....	.....	218,639	.....	3,000	.....
Norway	1,565,955	175,500	.....	38,650	.....	.....	48,314	11,320	.....	53,718
England	859,028	534,895	1,632,768	462,434	1,076,057	912,928	1,661,876	331,269	80,107	2,037,373
Scotland	504,681	1,081,568	1,387,473	699,428	723,406	158,858	790,865	147,481	218,440	670,091
Ireland	174,549	.....	.....	99,250	.....	31,867	33,665	1,128	.....	378,259
Canada	6,179,991	6,165,821	11,196,094	10,935,730	11,553,700	8,419,442	5,029,481	1,853,432	6,435,595	14,594,702
New Zealand	72,240	406,464	288,895	87,896	87,477	9,131	309,306	16,980	2,406	147,550
Other countries	57,418	18,195	805	57,803	49,396	144,720	420,178	4,767	23,253	505,629
Total	11,520,753	8,520,173	15,139,913	13,610,257	17,333,144	12,480,294	17,559,653	4,354,556	9,307,428	27,113,056